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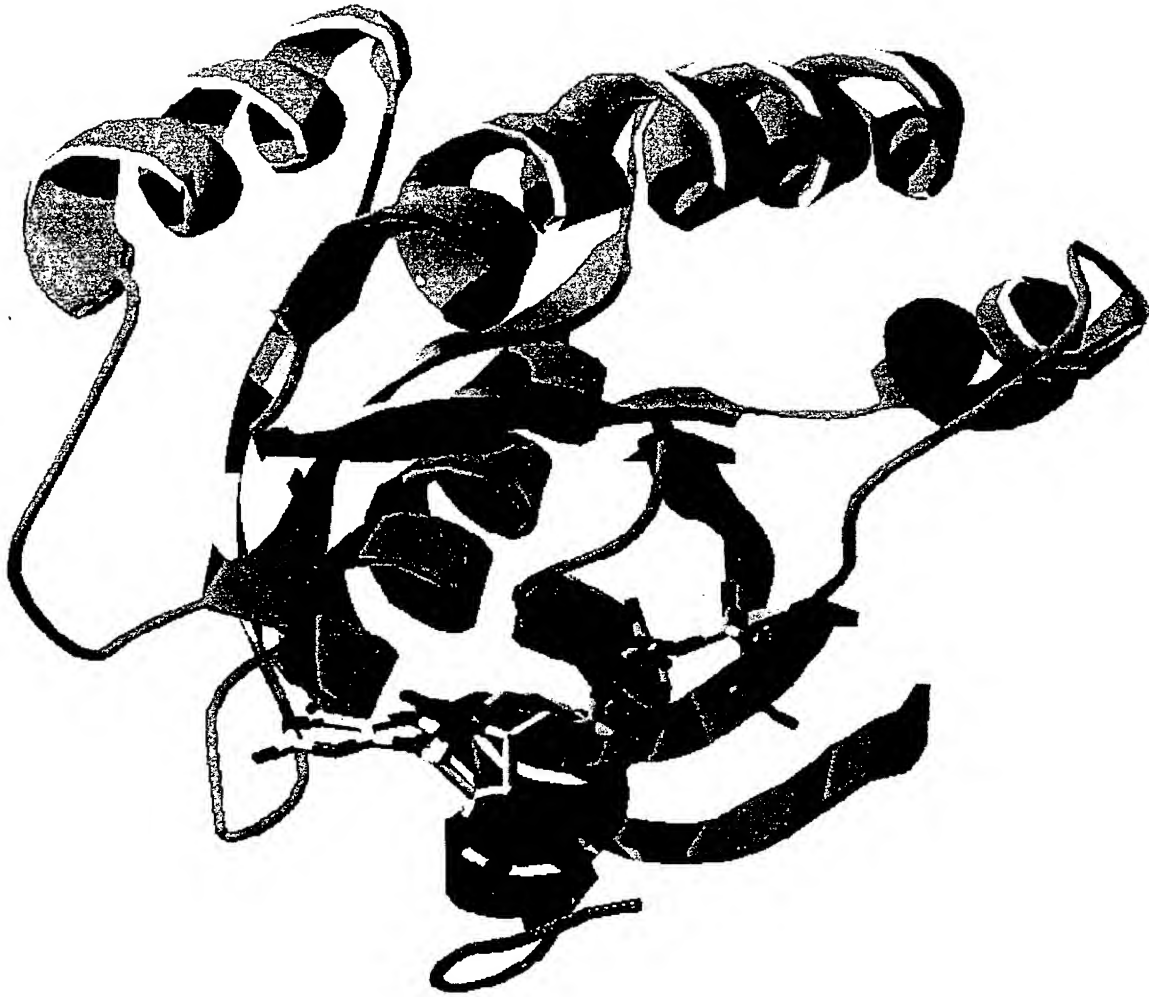


Fig. 1

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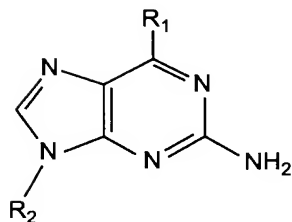


Fig. 2A

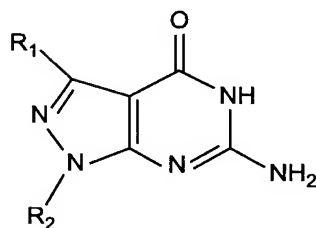


Fig. 2B

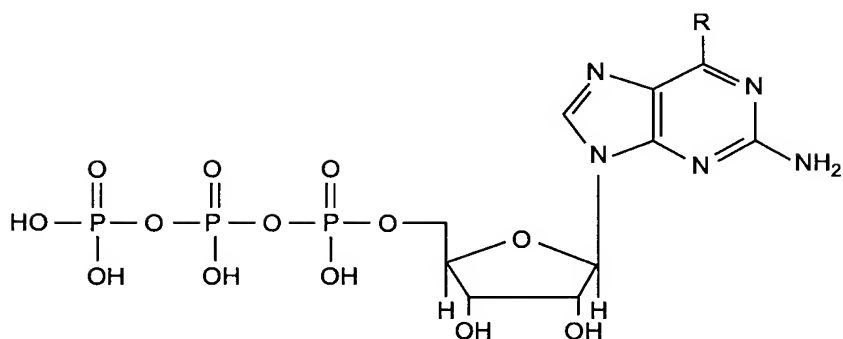


Fig. 2C

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Fig. 2D

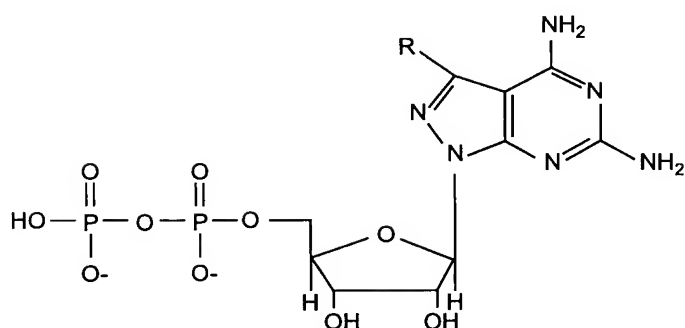
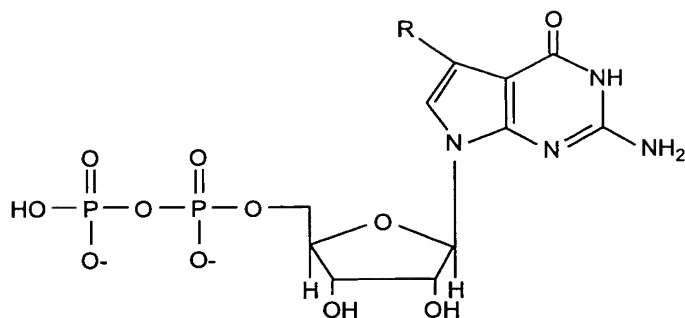


Fig. 2E

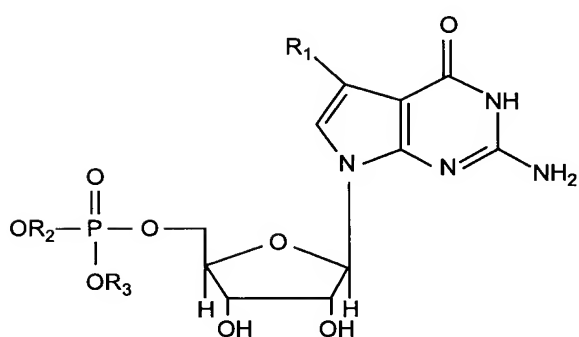


Fig. 2F

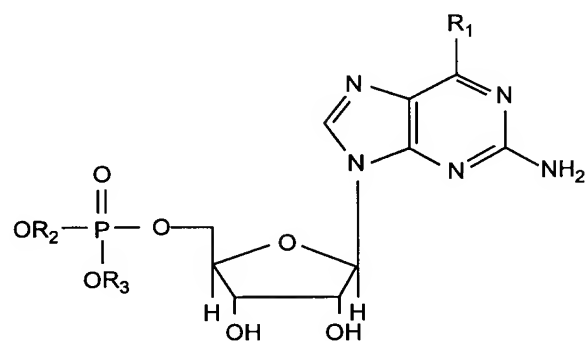


Fig. 2G

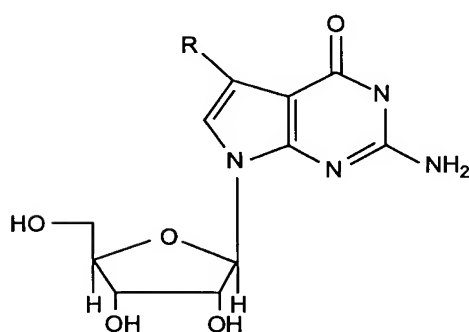


Fig. 2H

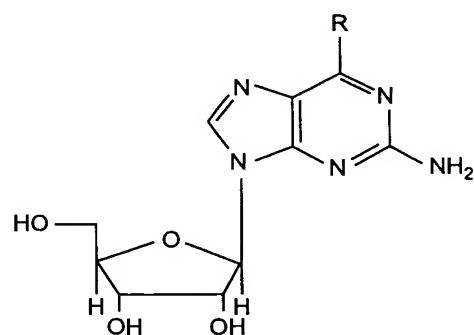
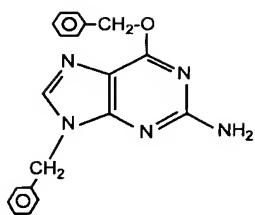
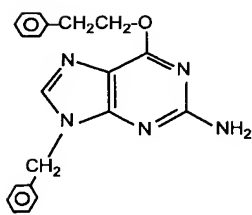


Fig. 2I

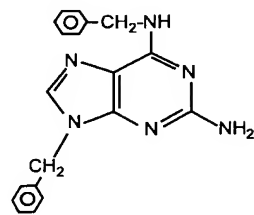
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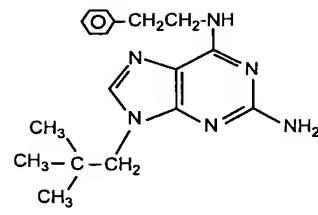
Compound 1



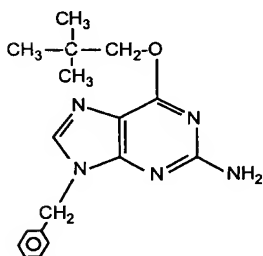
Compound 2



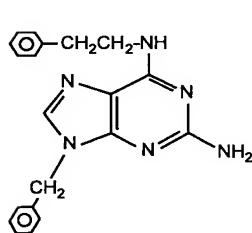
Compound 3



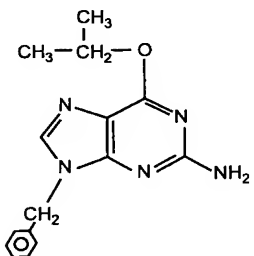
Compound 4



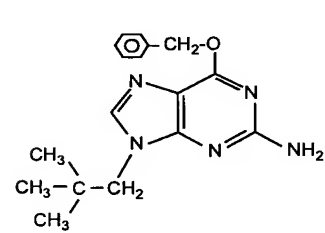
Compound 5



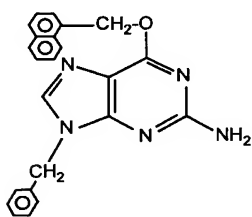
Compound 6



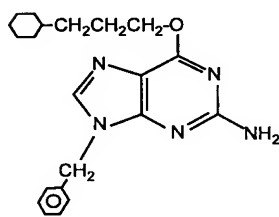
Compound 7



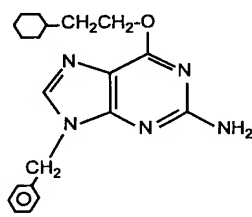
Compound 8



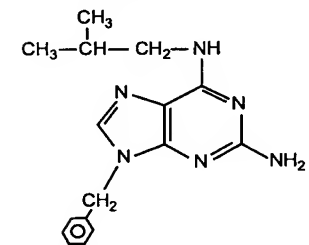
Compound 9



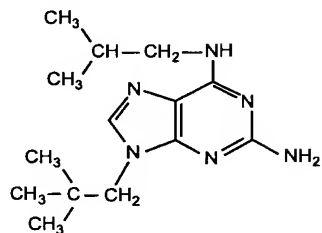
Compound 10



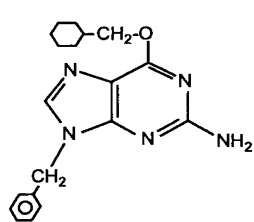
Compound 11



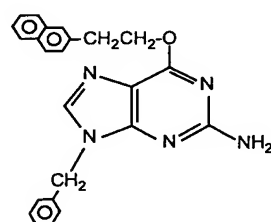
Compound 12



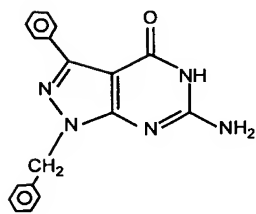
Compound 13



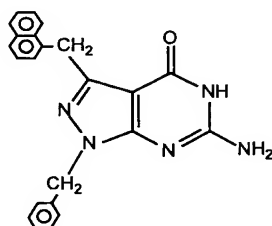
Compound 14



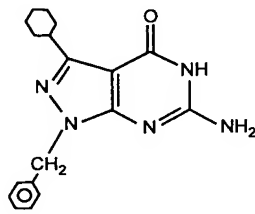
Compound 15



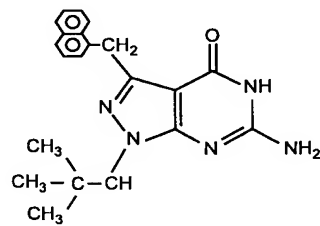
Compound 16



Compound 17



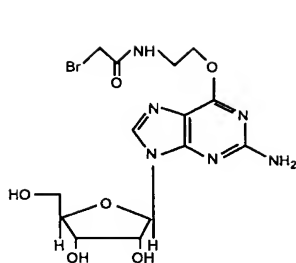
Compound 18



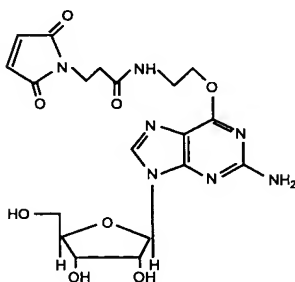
Compound 19

Fig. 3

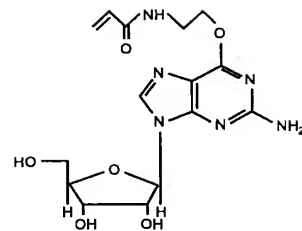
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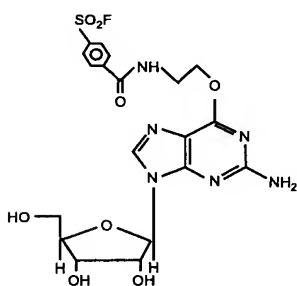
Compound 21



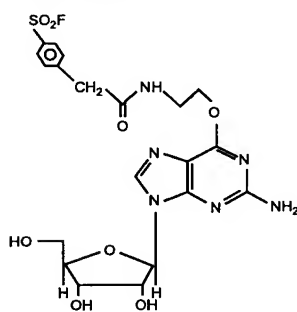
Compound 22



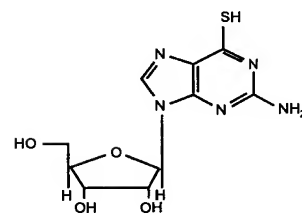
Compound 23



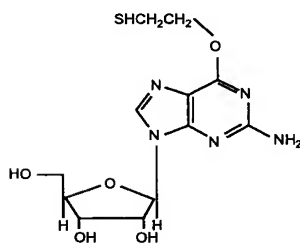
Compound 24



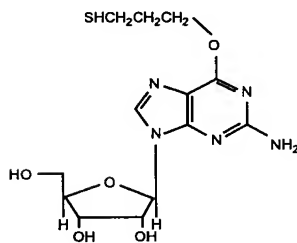
Compound 25



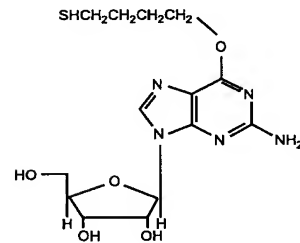
Compound 26



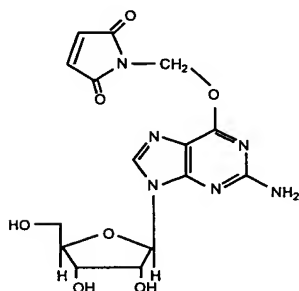
Compound 27



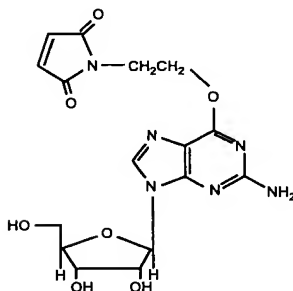
Compound 28



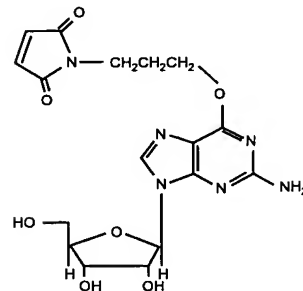
Compound 29



Compound 30



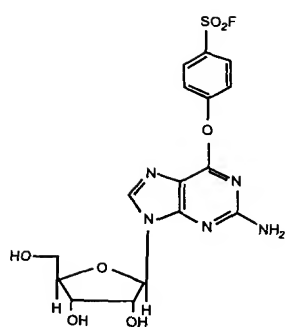
Compound 31



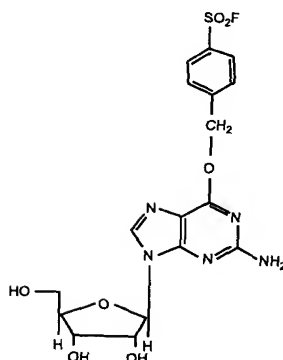
Compound 32

Fig. 4

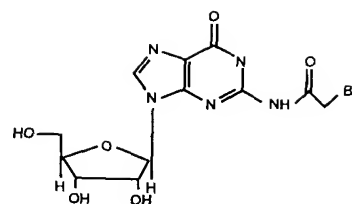
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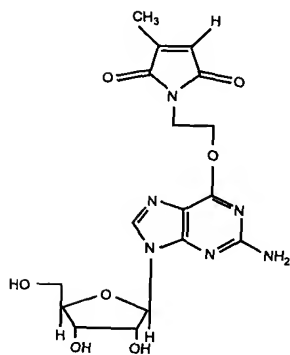
Compound 33



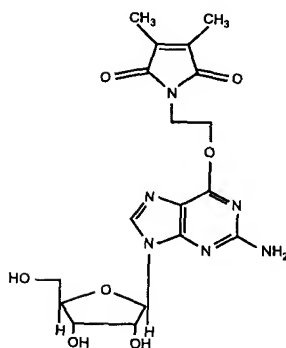
Compound 34



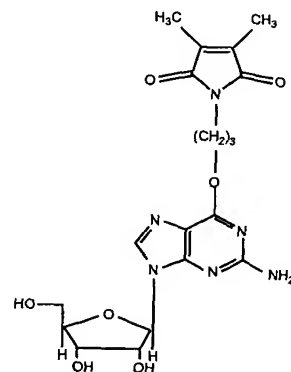
Compound 35



Compound 36



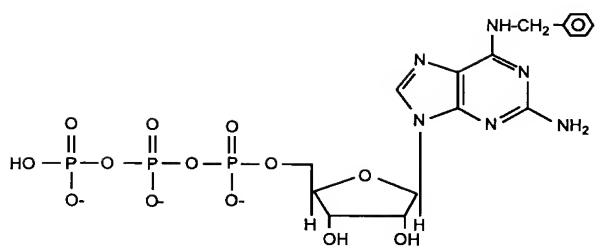
Compound 37



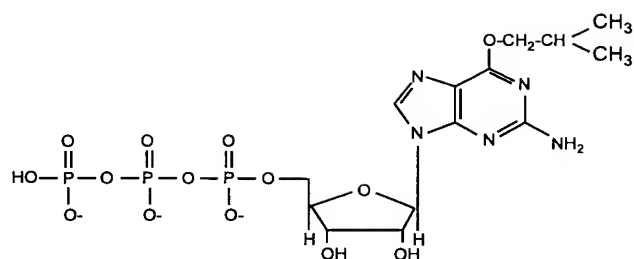
Compound 38

Fig. 4 Cont.

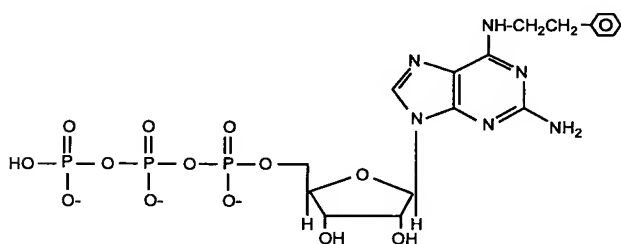
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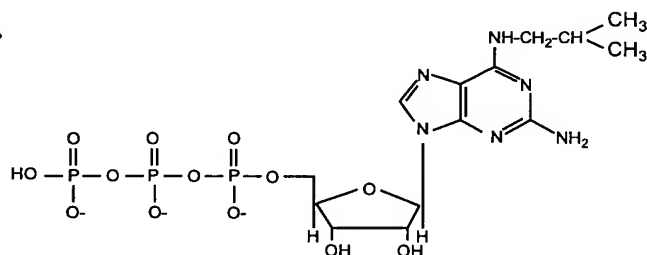
Compound 39



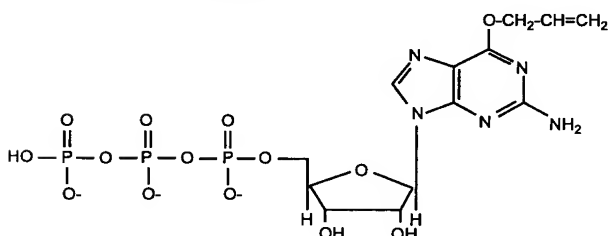
Compound 40



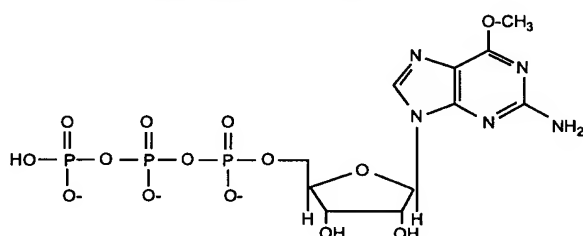
Compound 41



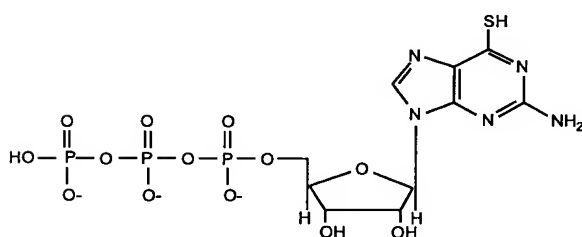
Compound 42



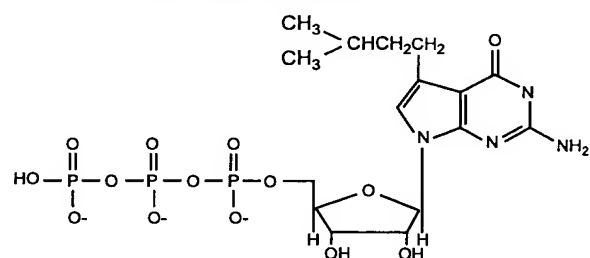
Compound 43



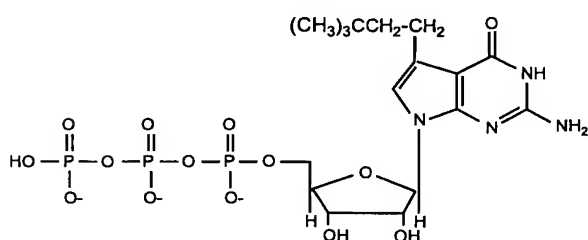
Compound 44



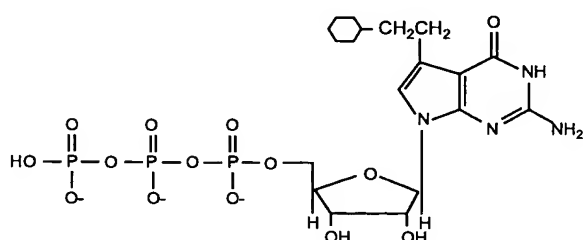
Compound 45



Compound 46



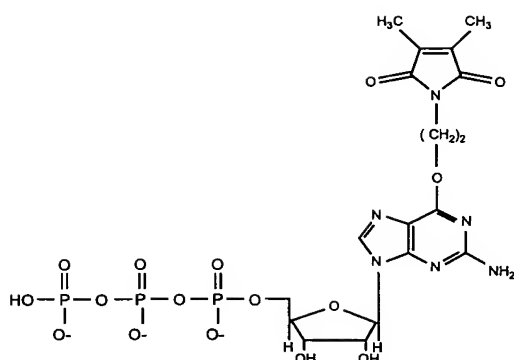
Compound 47



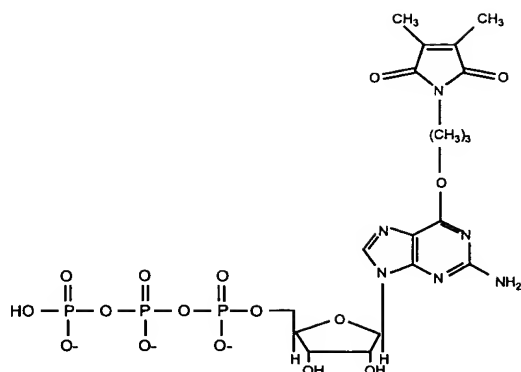
Compound 48

Fig. 5

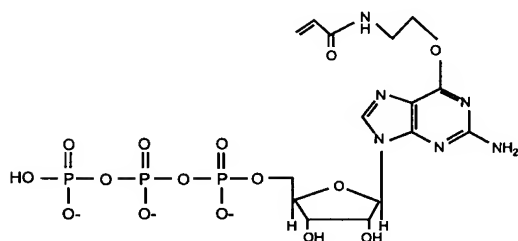
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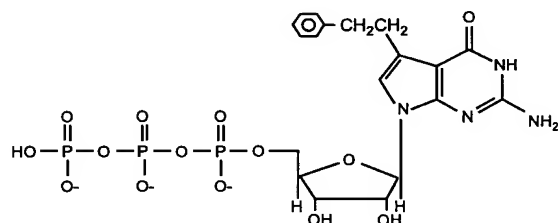
Compound 49



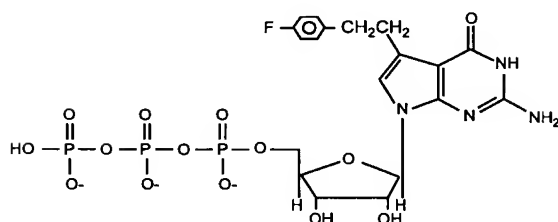
Compound 50



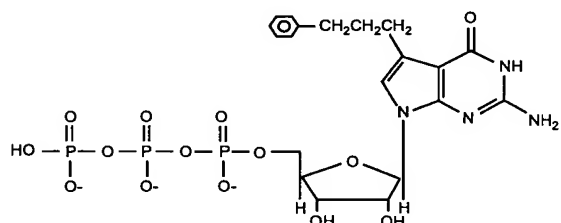
Compound 51



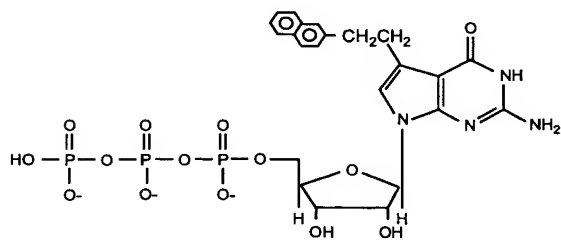
Compound 52



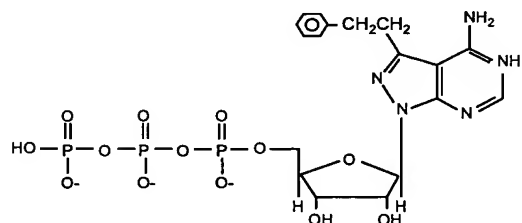
Compound 53



Compound 54



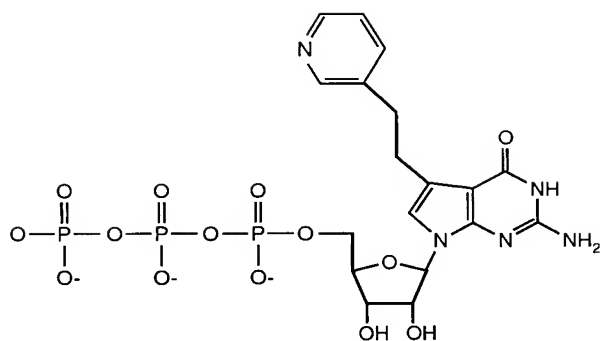
Compound 55



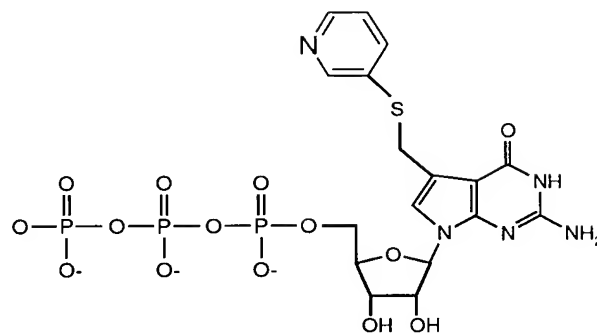
Compound 56

Fig. 5 Cont.

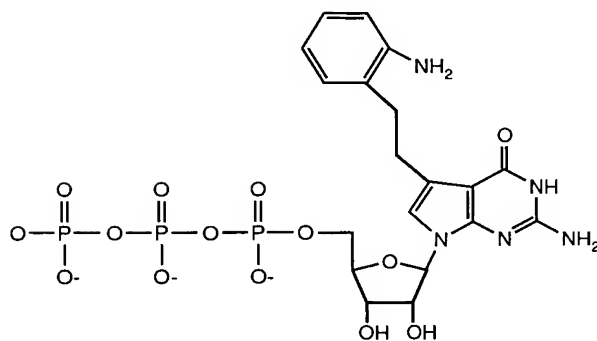
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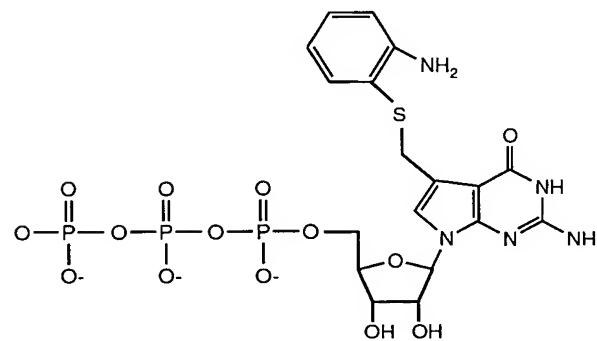
Compound 98



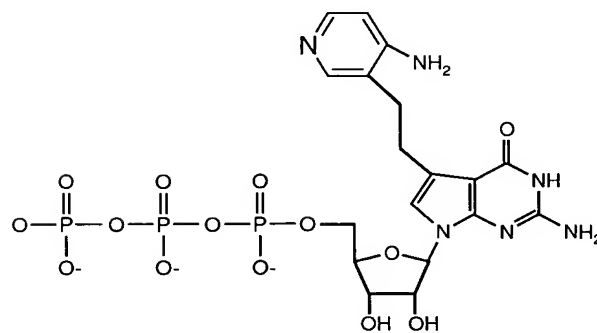
Compound 99



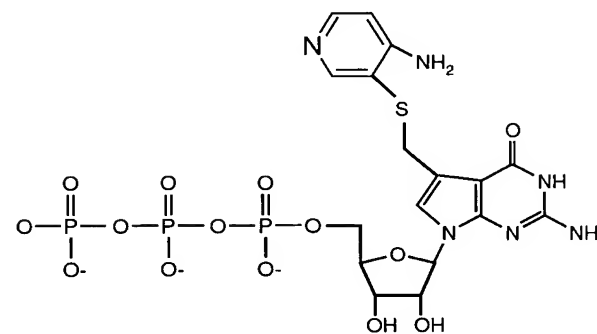
Compound 100



Compound 101



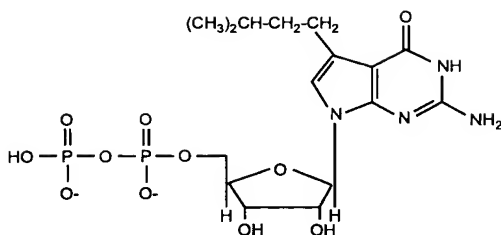
Compound 102



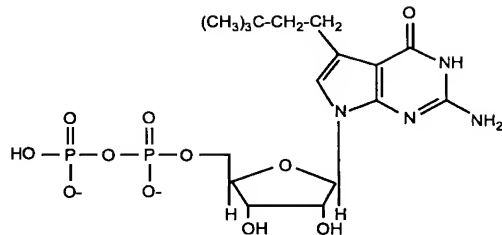
Compound 103

Fig. 5 Cont.

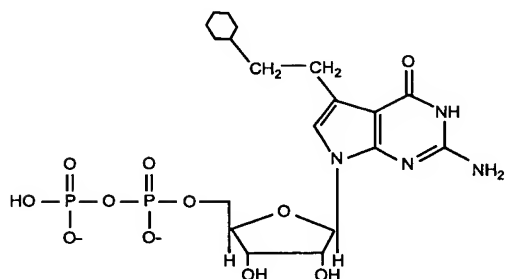
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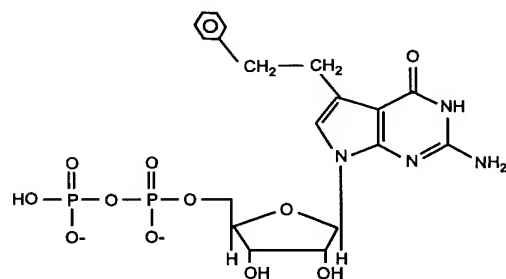
Compound 57



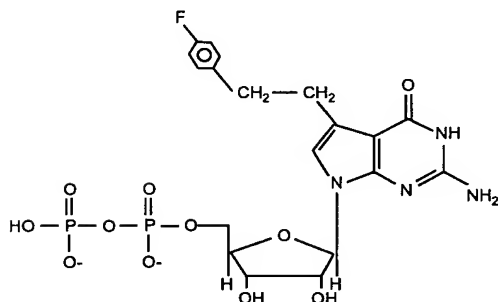
Compound 58



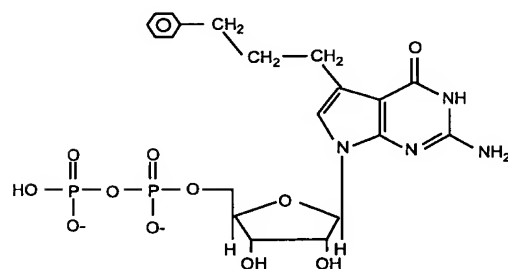
Compound 59



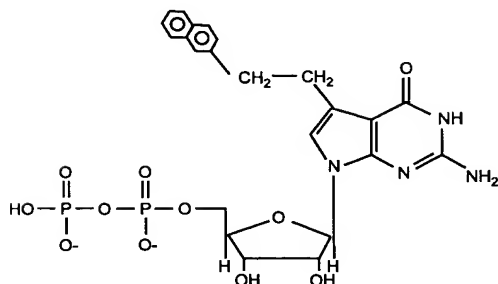
Compound 60



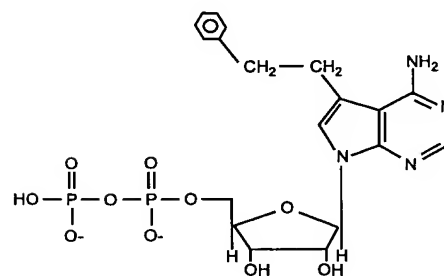
Compound 61



Compound 62



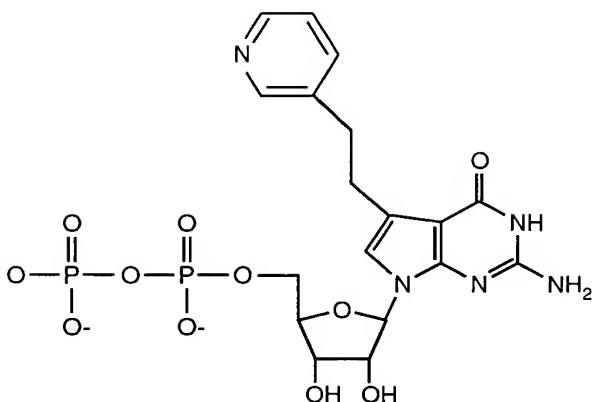
Compound 63



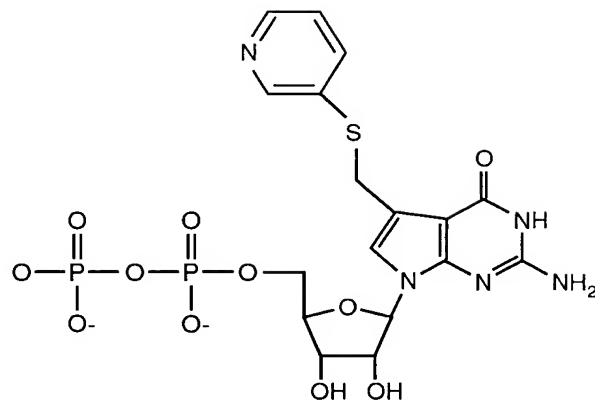
Compound 64

Fig. 6

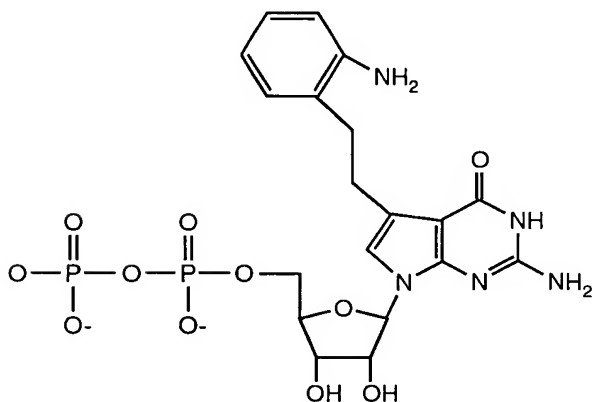
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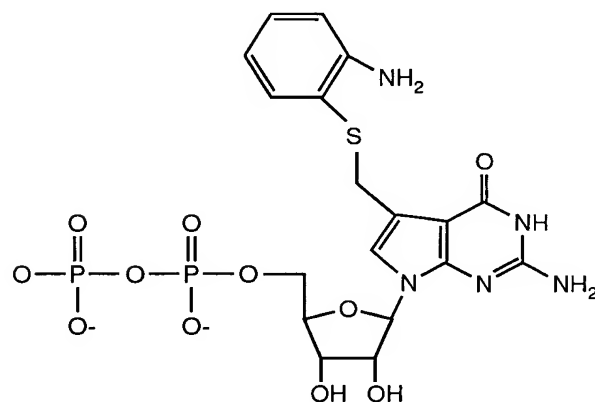
Compound 92



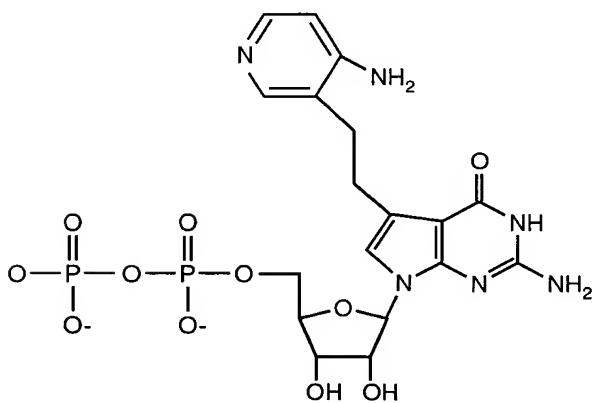
Compound 93



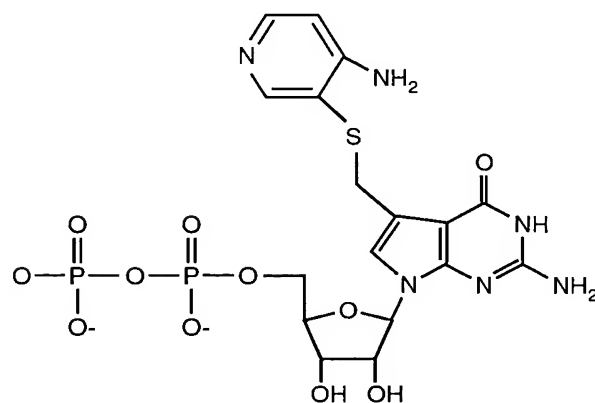
Compound 94



Compound 95



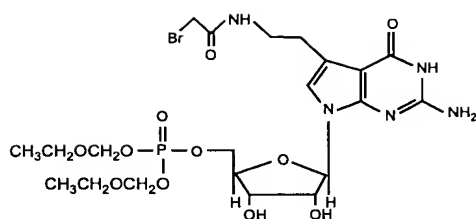
Compound 96



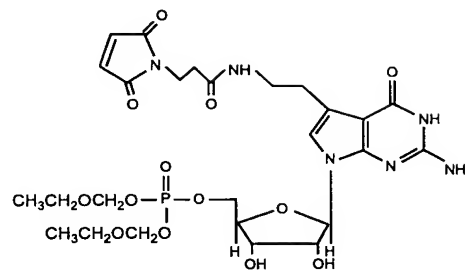
Compound 97

Fig. 6 Cont.

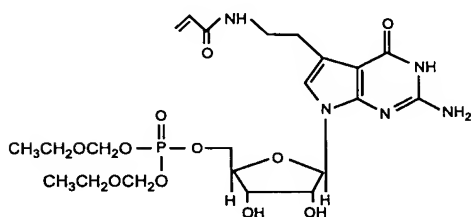
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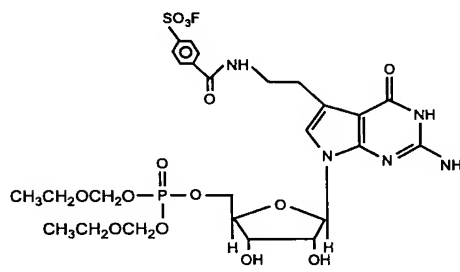
Compound 65



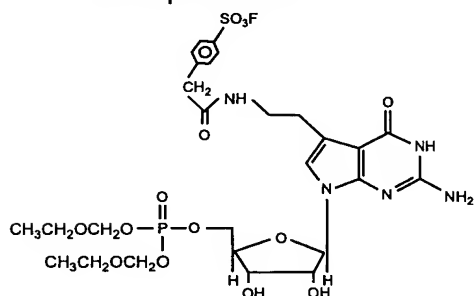
Compound 66



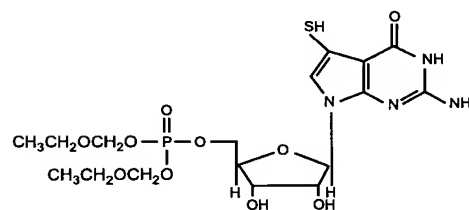
Compound 67



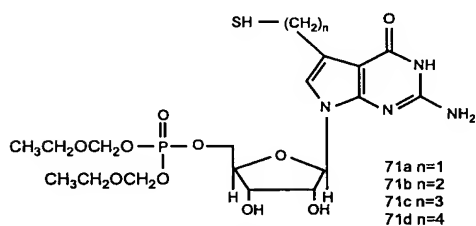
Compound 68



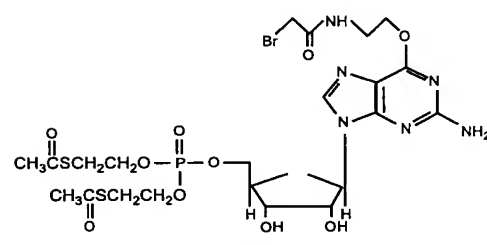
Compound 69



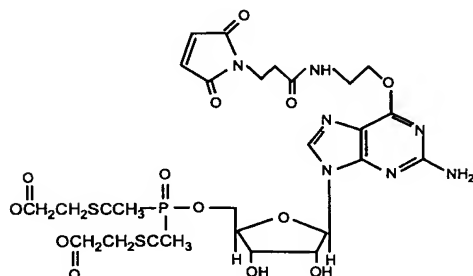
Compound 70



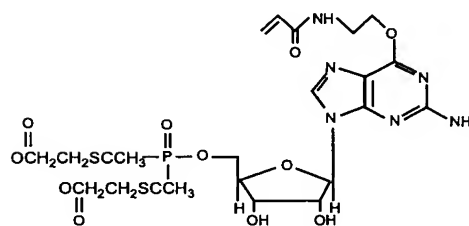
Compound 71



Compound 72



Compound 73



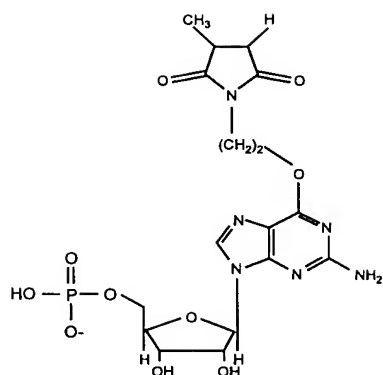
Compound 74

Fig. 7

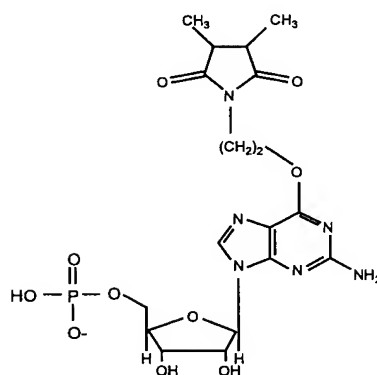


Fig. 7 Cont.

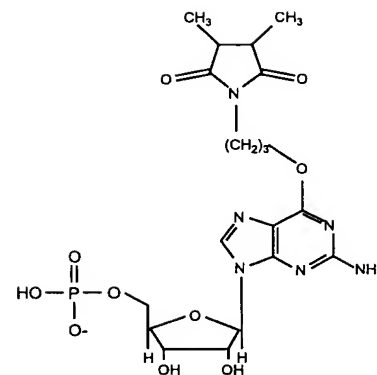
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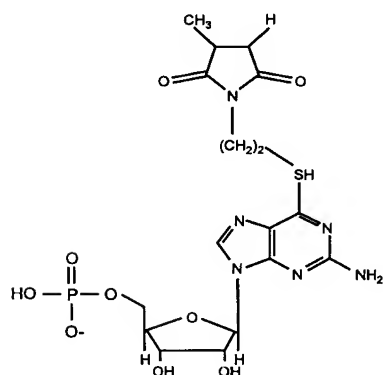
Compound 83



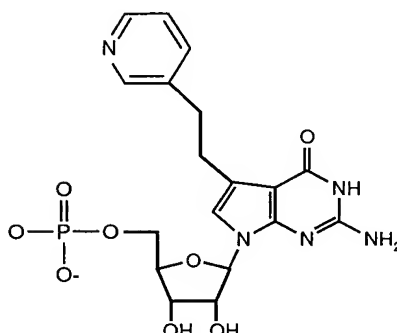
Compound 84



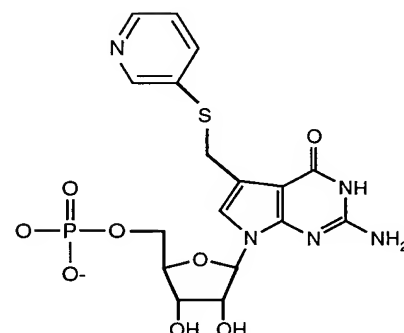
Compound 85



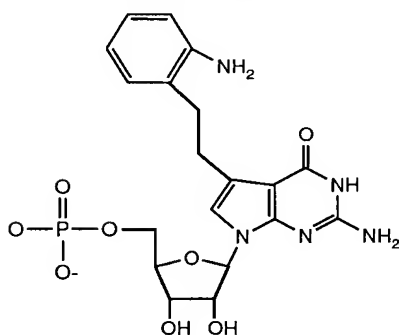
Compound 20



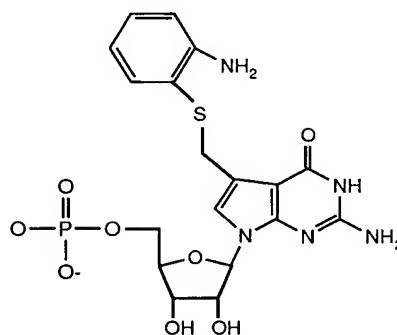
Compound 86



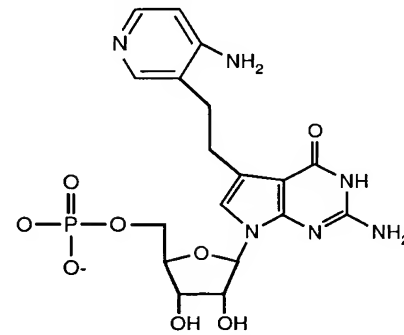
Compound 87



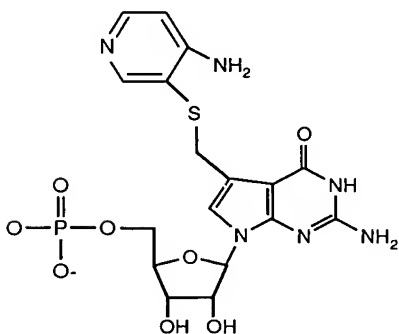
Compound 88



Compound 89



Compound 90



Compound 91

Fig. 7 Cont.

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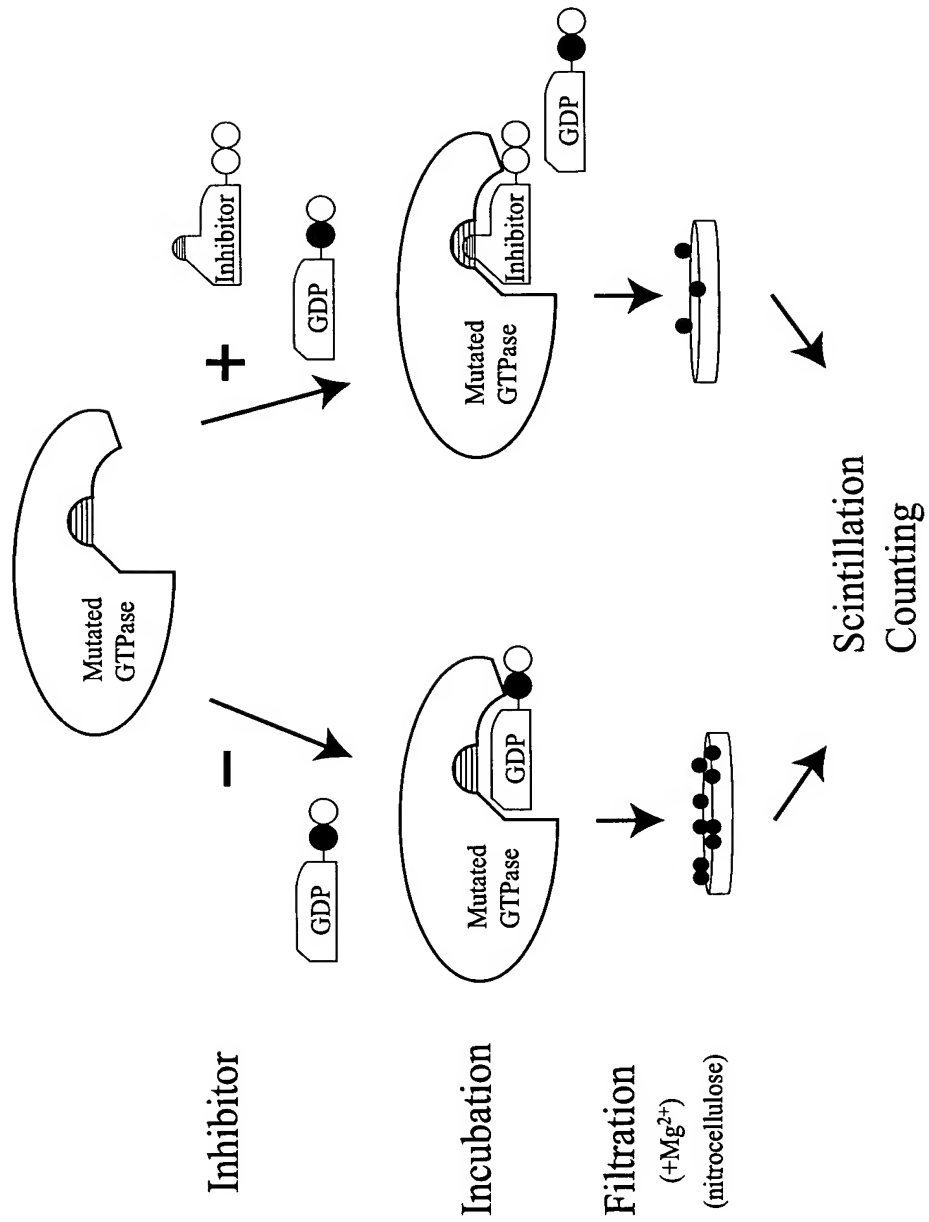


Fig. 8

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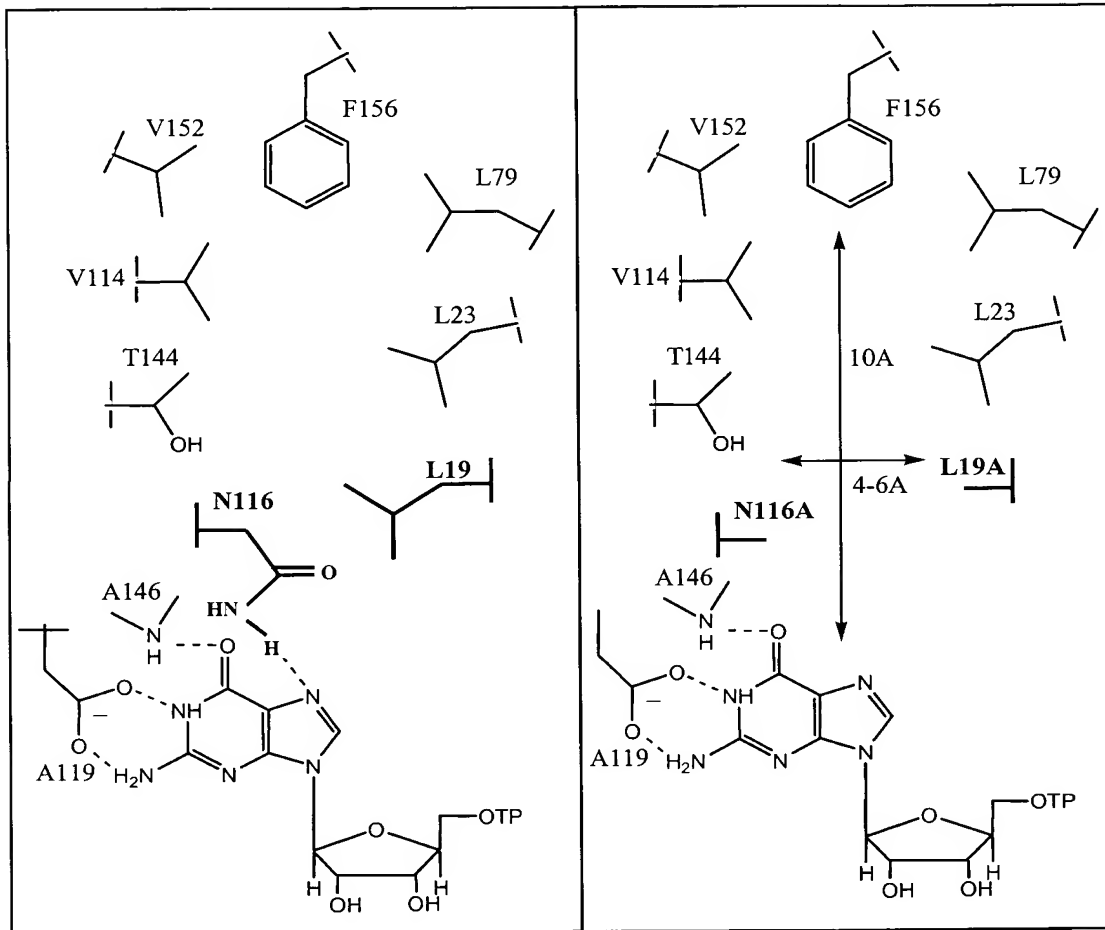


Fig. 9A

Fig. 9B

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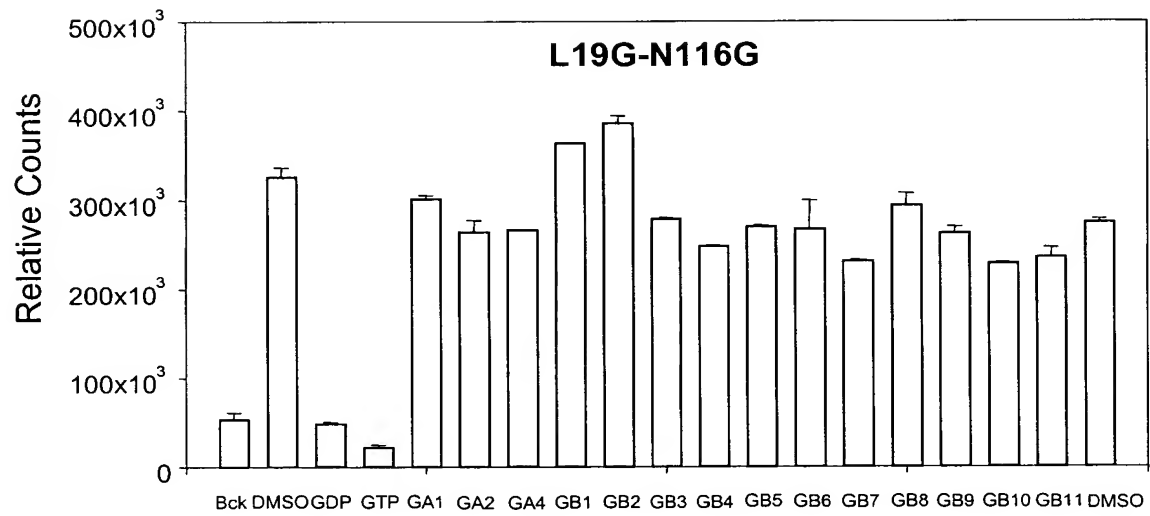


Fig. 10

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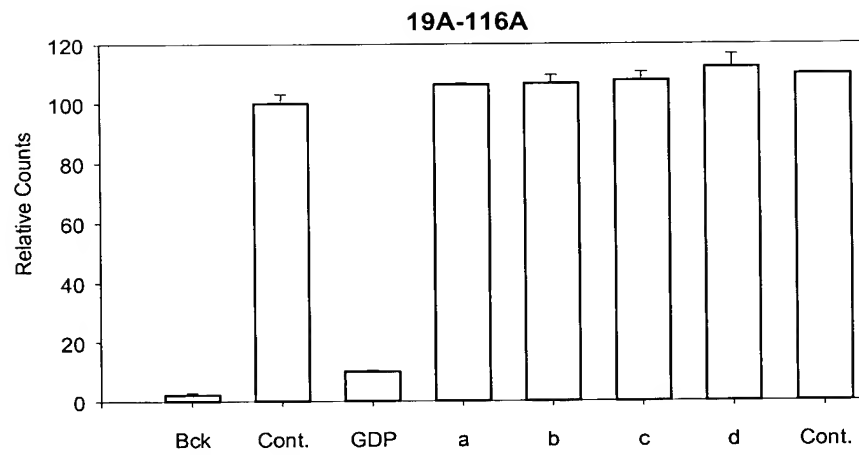


Fig. 11

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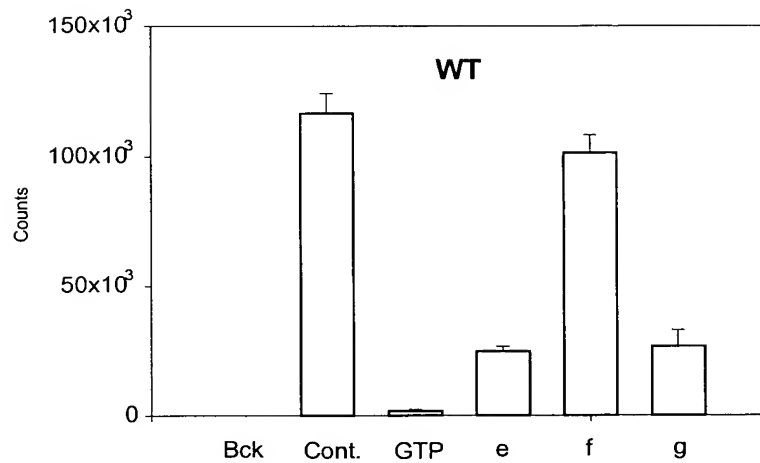


Fig. 12A

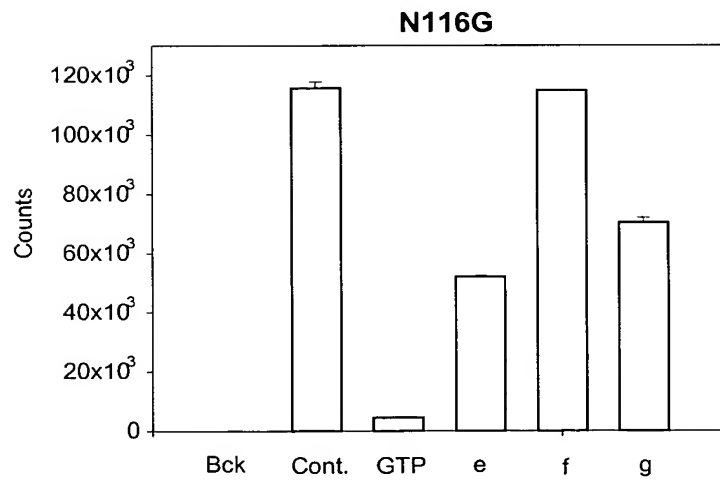


Fig. 12B

20/44

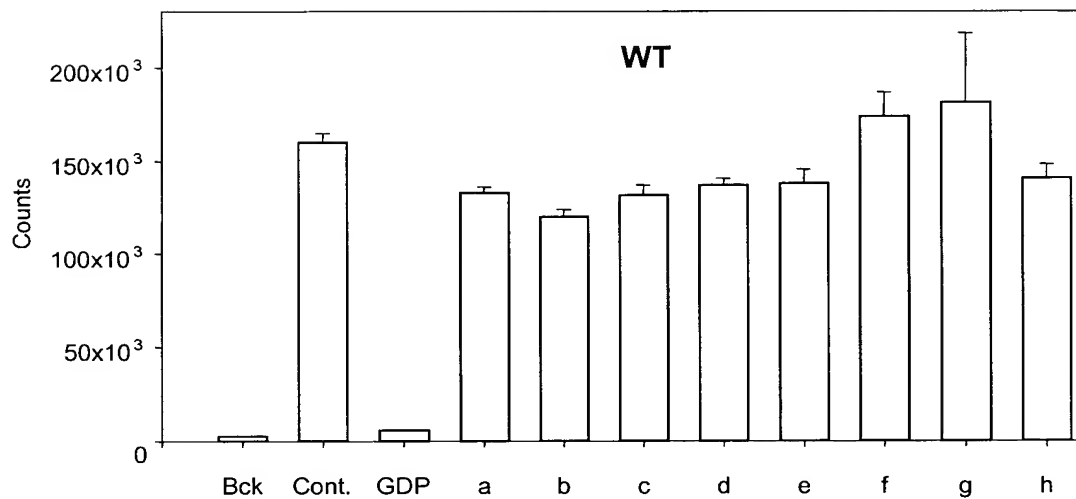


Fig. 13A

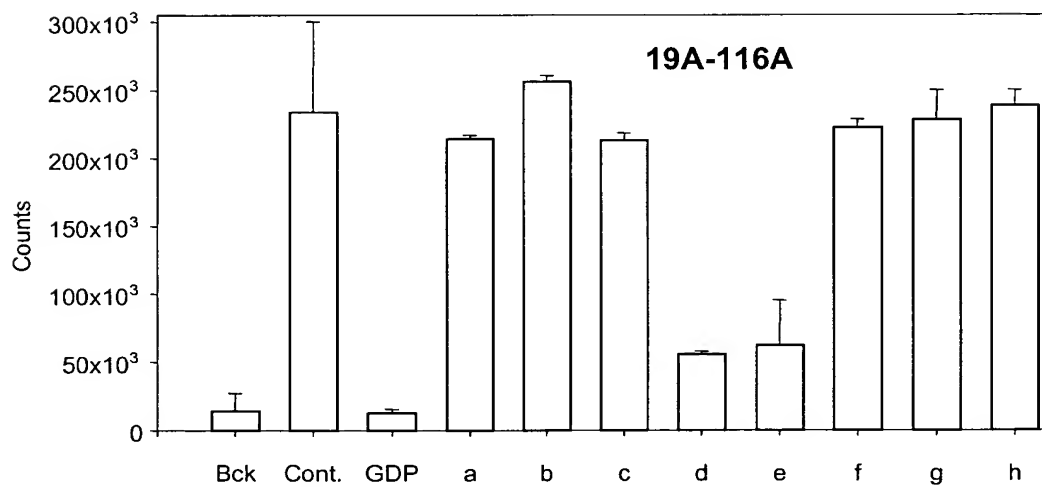


Fig. 13B

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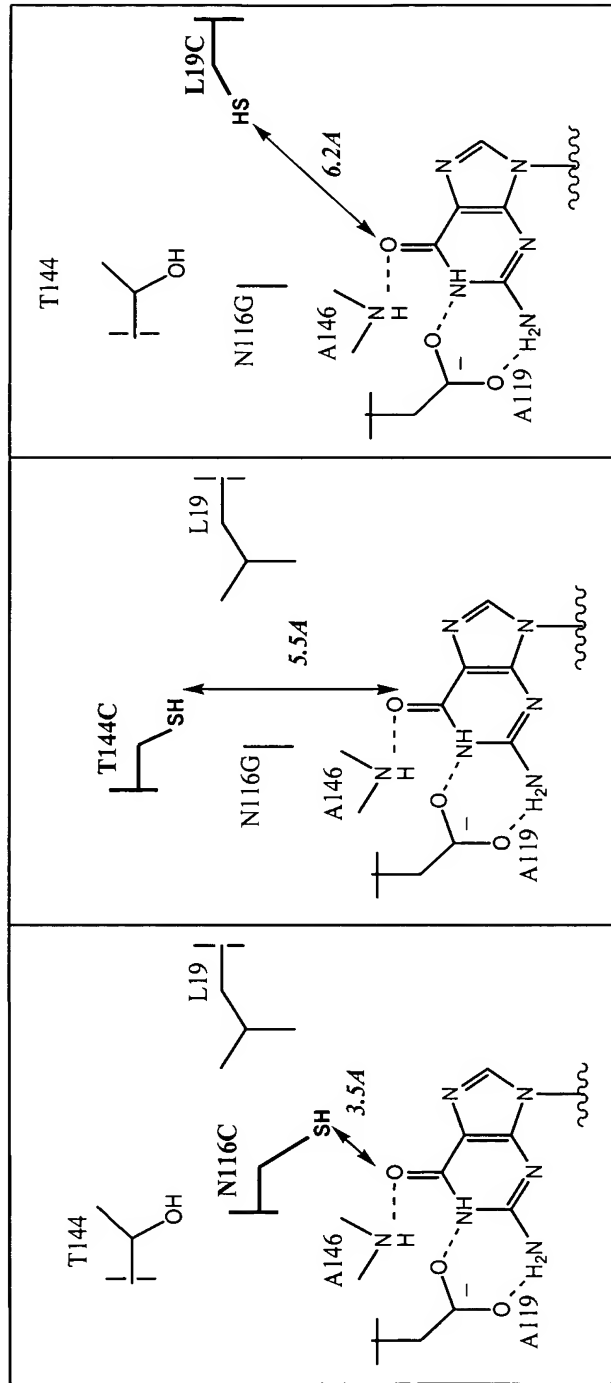


Fig. 14C

Fig. 14B

Fig. 14A

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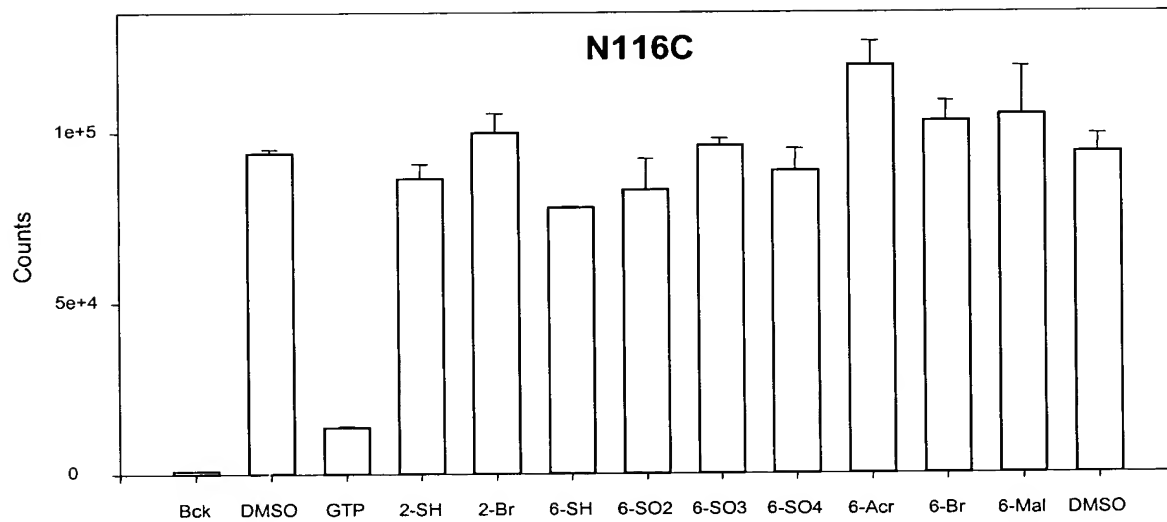


Fig. 15

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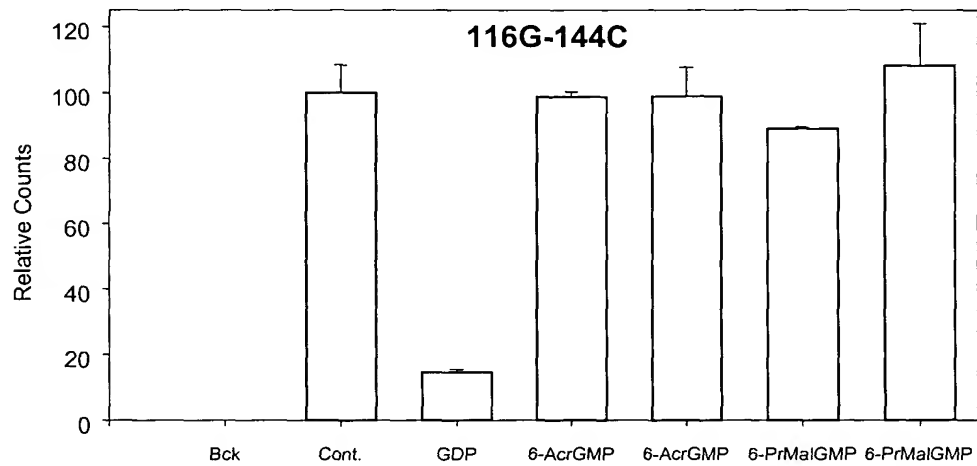


Fig. 16

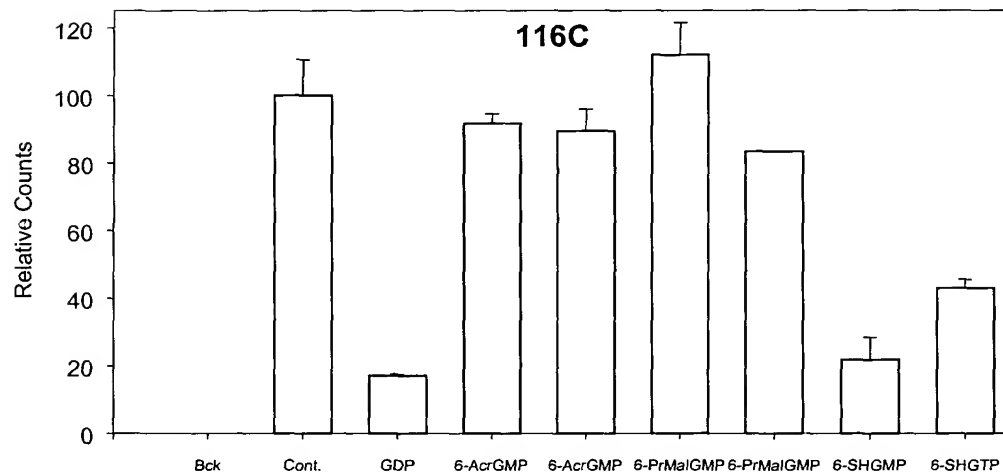


Fig. 17

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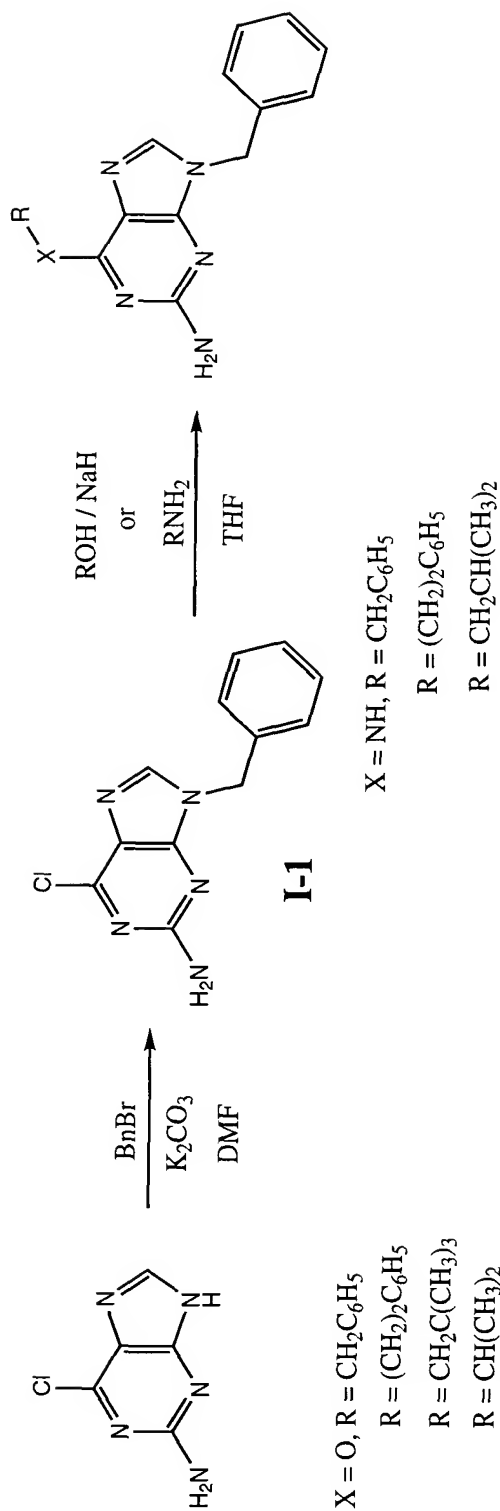


Fig. 18A

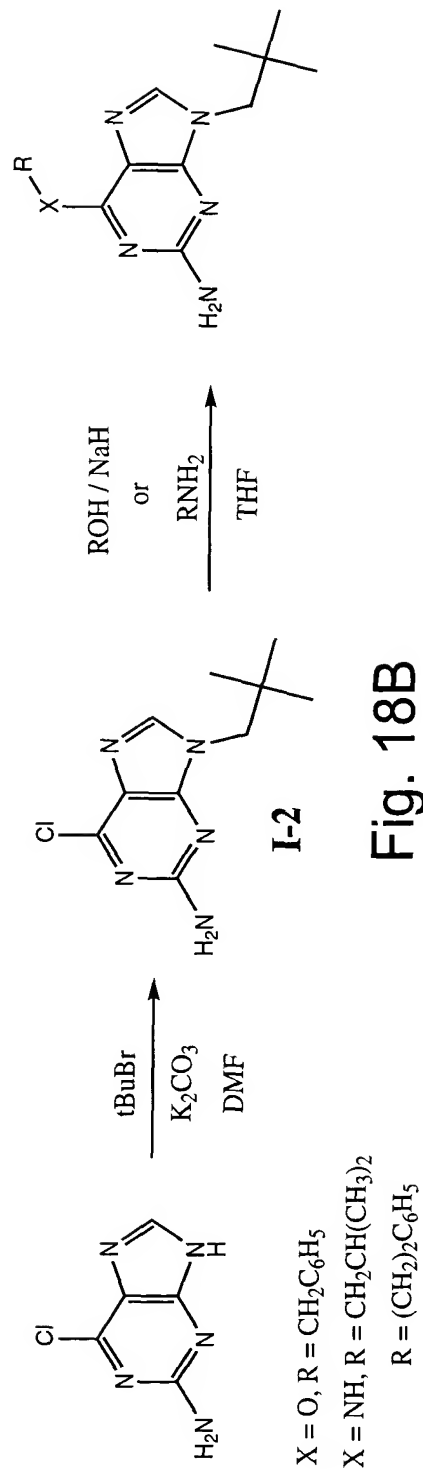


Fig. 18B

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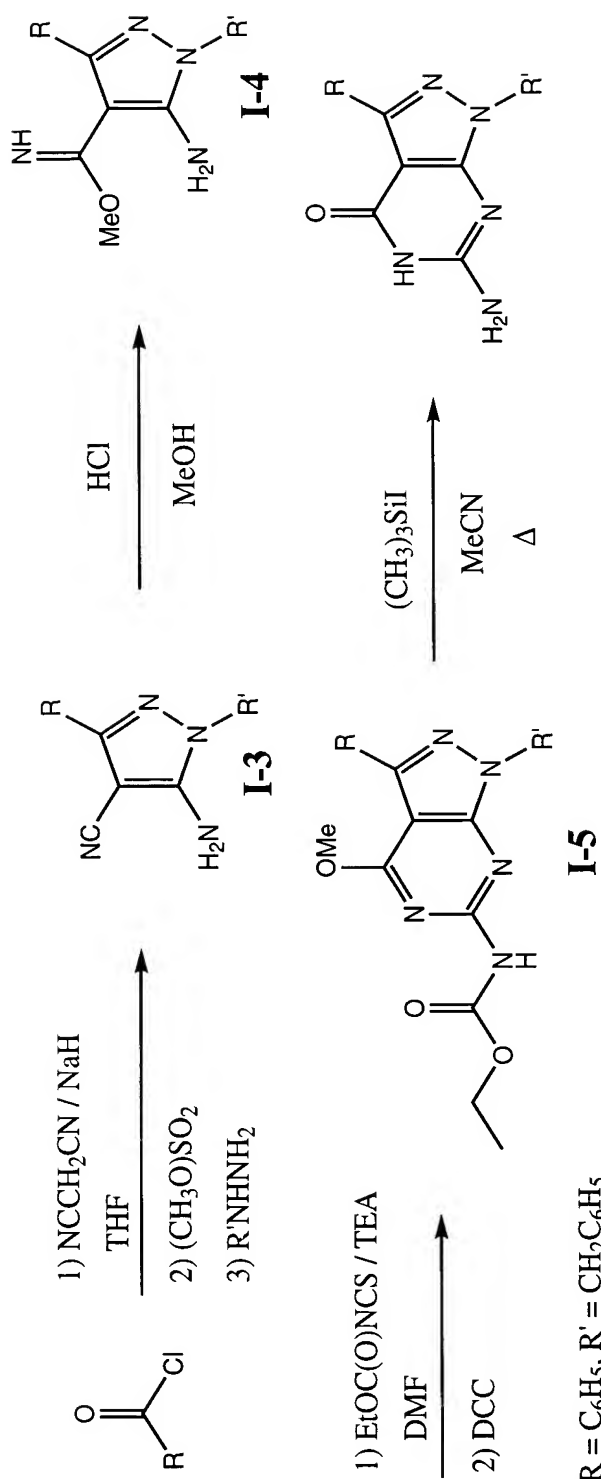


Fig. 18C

Sugar Preparation:

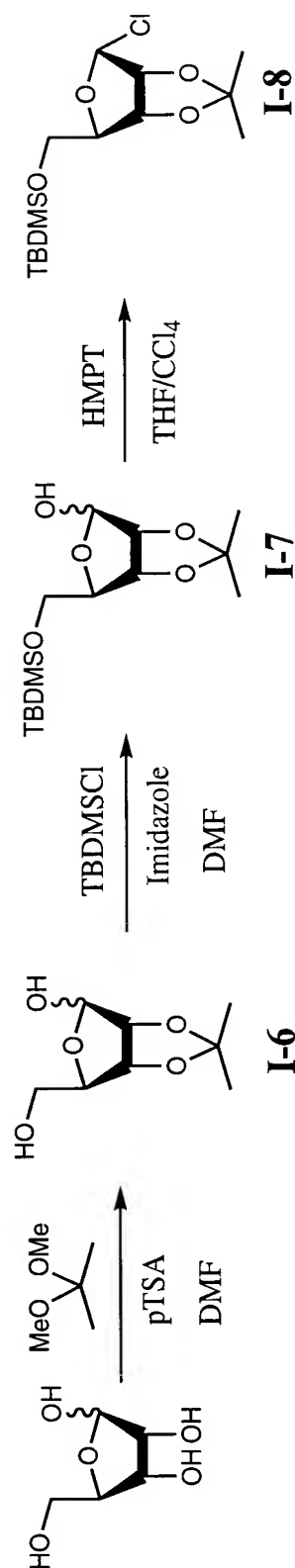


Fig. 19

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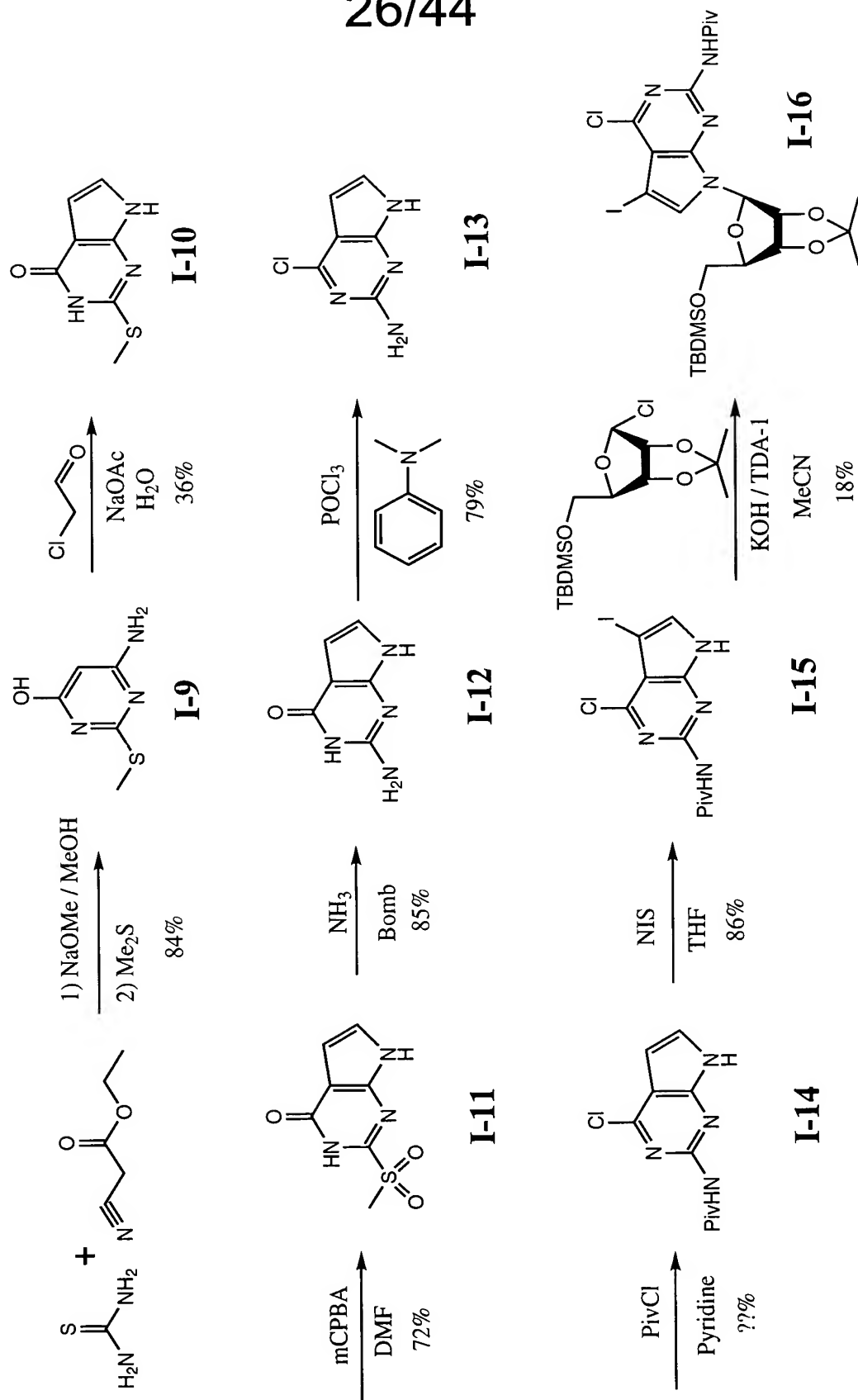
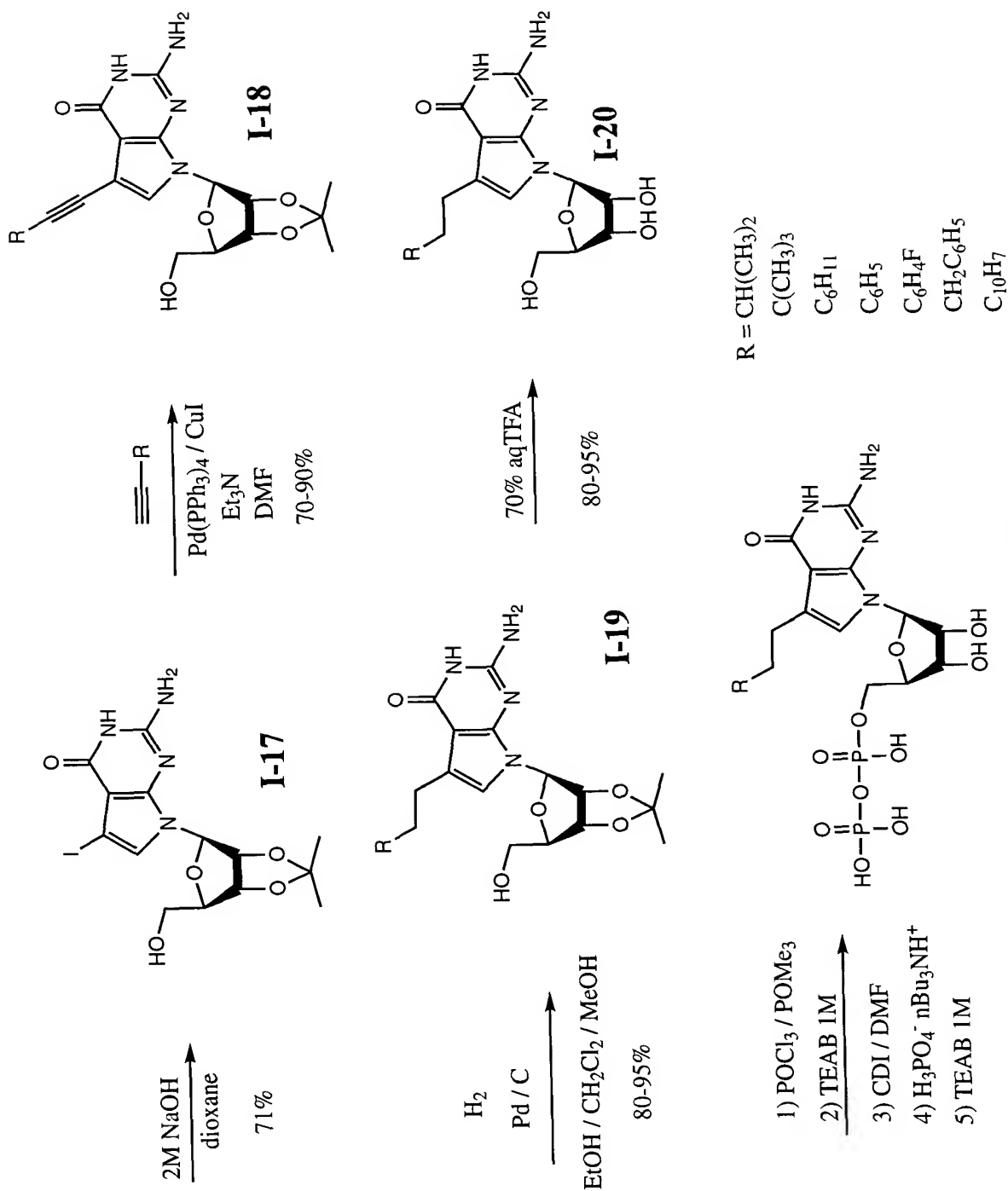


Fig. 20

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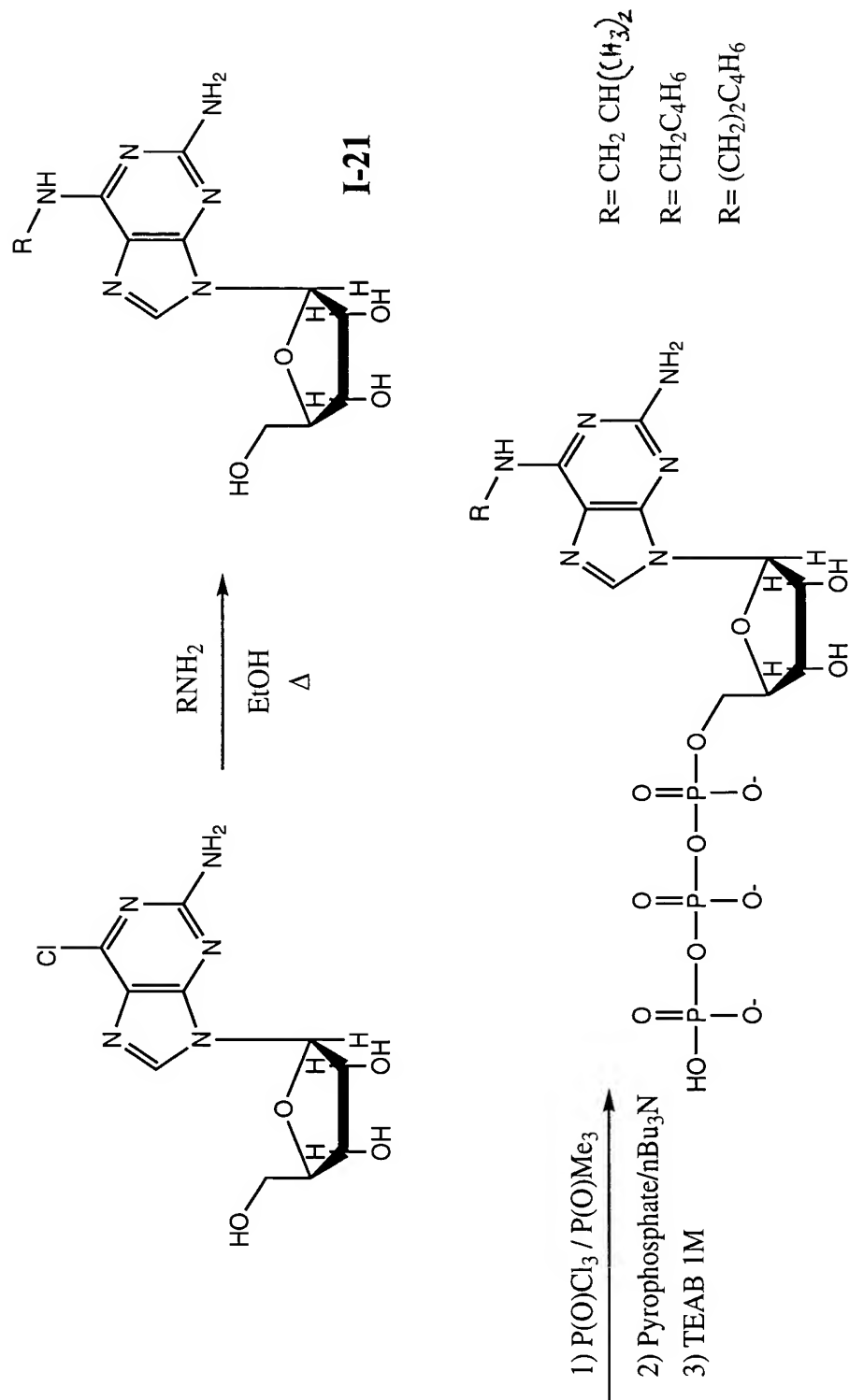


Fig. 22

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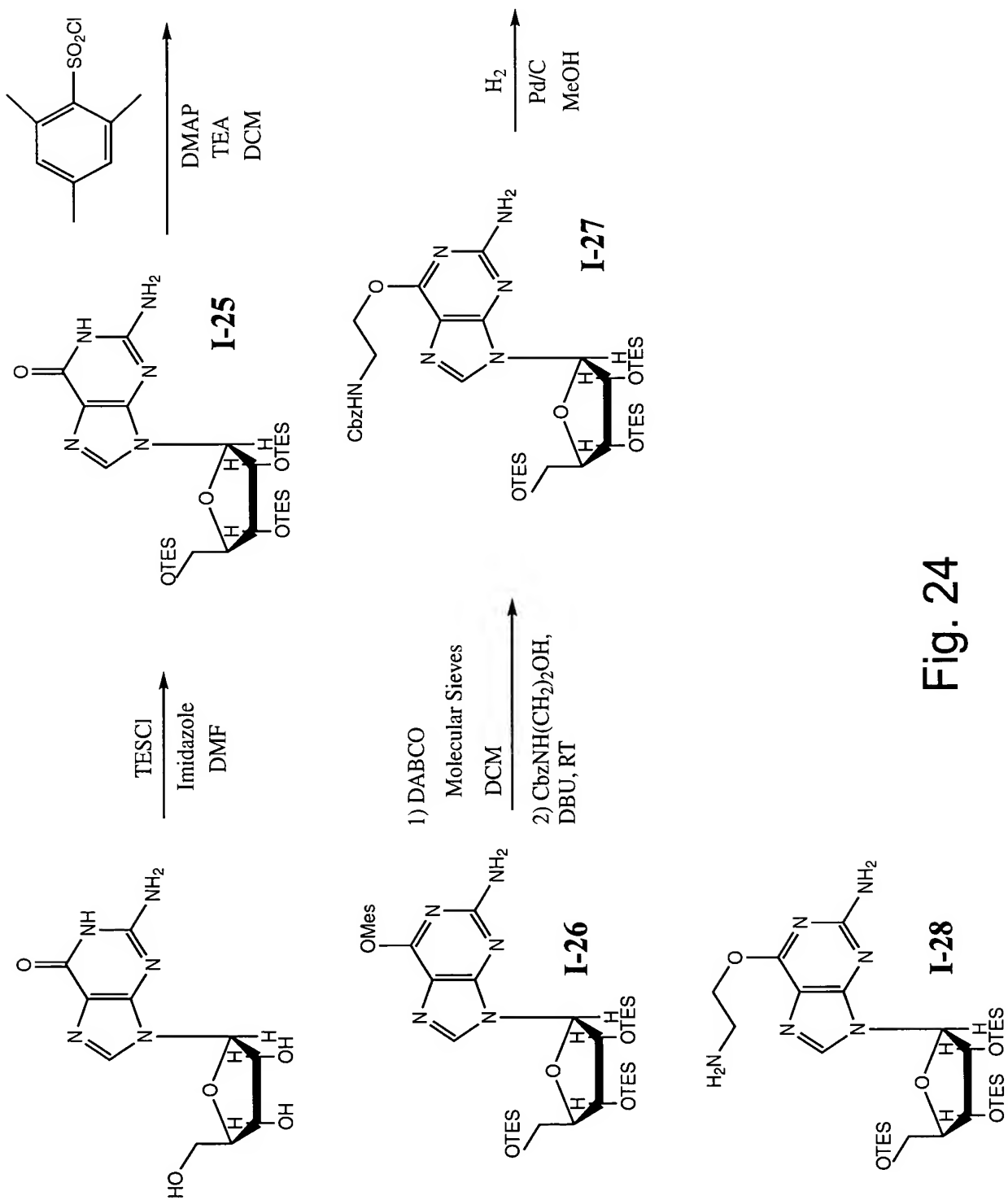


Fig. 24

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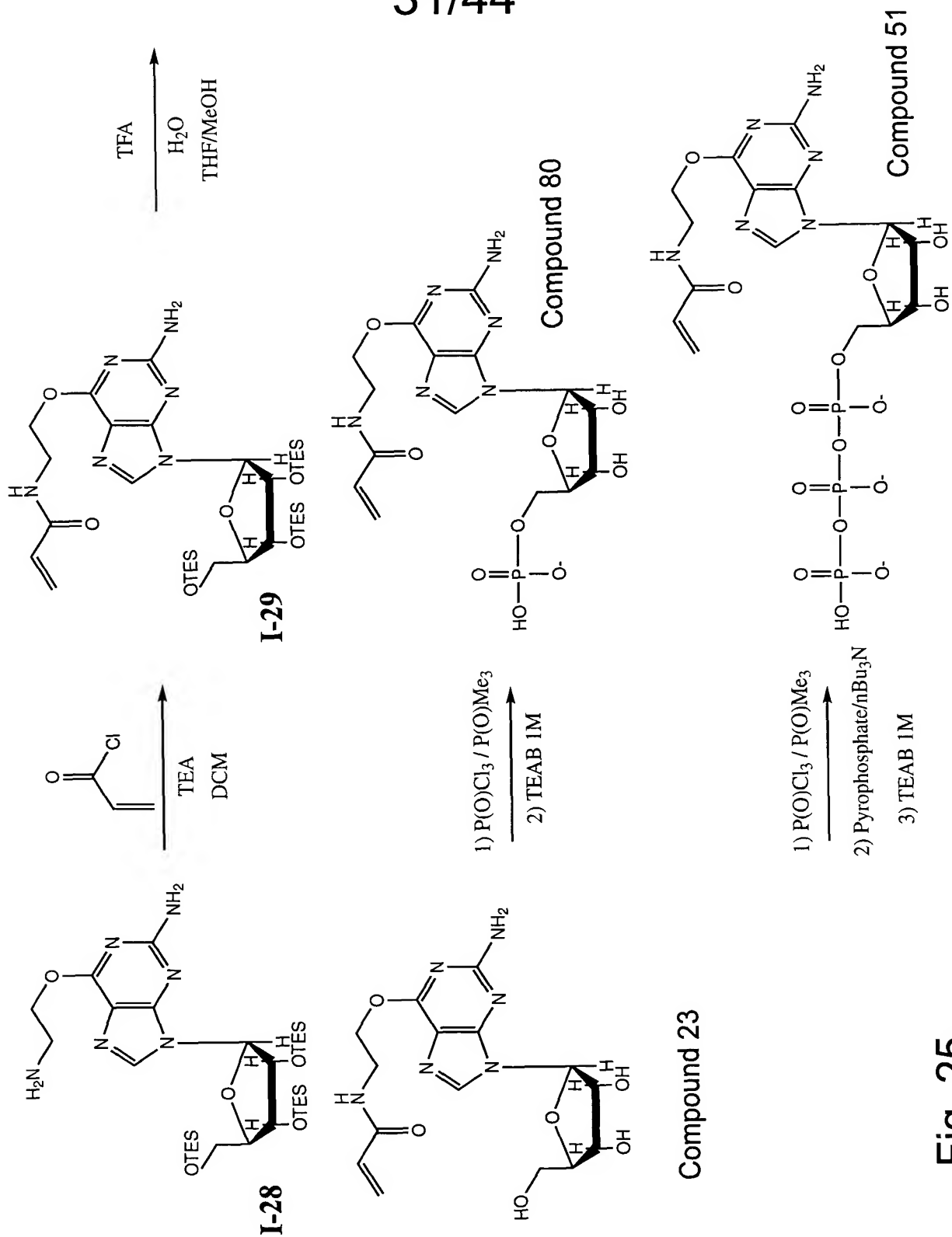
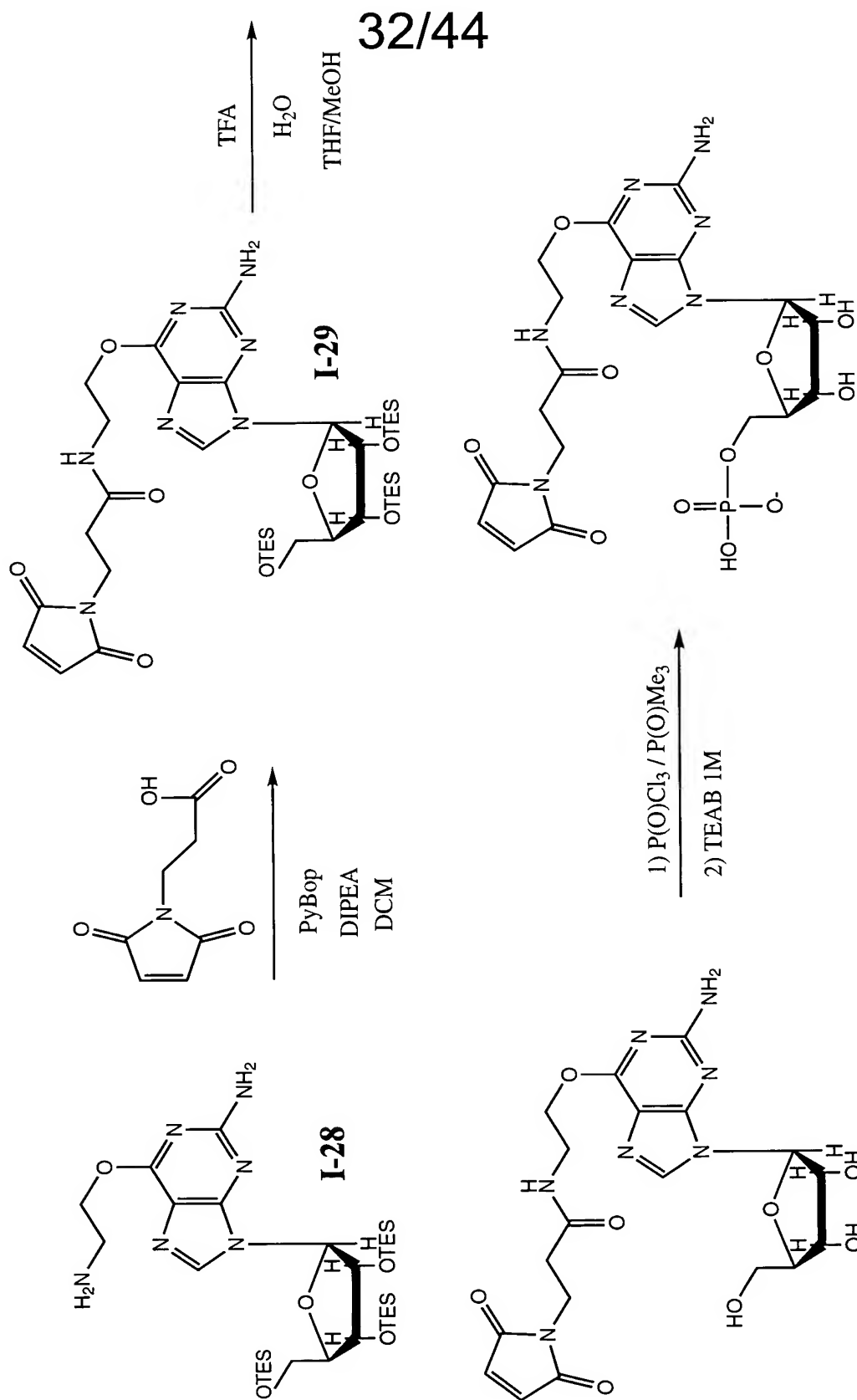


Fig. 25



Compound 81

Fig. 26

Compound 22

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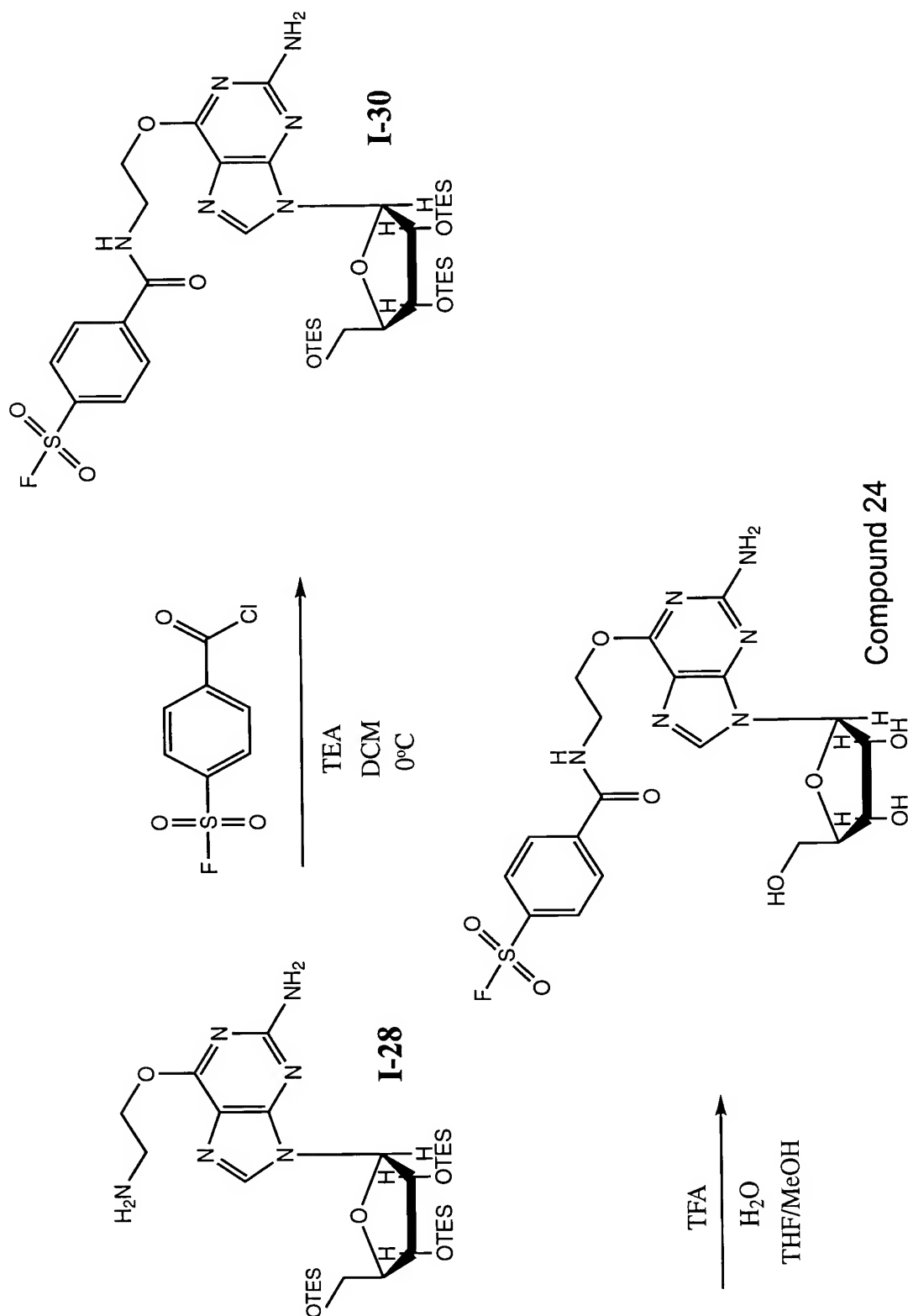


Fig. 27

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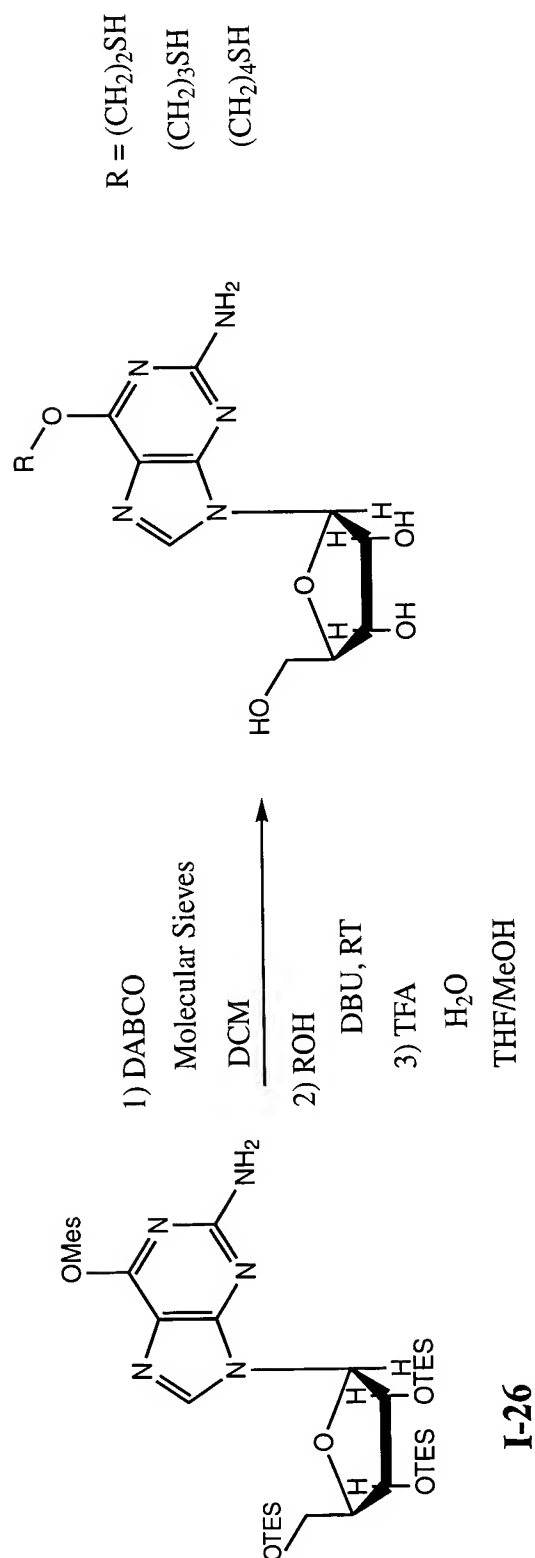


Fig. 28

Fig. 20

Reaction scheme for the synthesis of nucleoside phosphates:

Top Reaction: A nucleoside derivative (containing a 2'-OTES group) reacts with a substituted succinimide (R, R') in the presence of DABCO, Molecular Sieves, and DCM to form a nucleoside intermediate (I-26). The reaction is then treated with DBU at room temperature (RT) to yield a nucleoside phosphate (I-27).

Bottom Reaction: A nucleoside derivative (containing a 2'-OTES group) reacts with a substituted succinimide (R, R') in the presence of DABCO, Molecular Sieves, and DCM to form a nucleoside intermediate (I-26). The reaction is then treated with DBU at room temperature (RT) to yield a nucleoside phosphate (I-27).

Chemical Structures:

I-26: A nucleoside derivative with a 2'-OTES group and a 5'-OMe group, reacting with a substituted succinimide (R, R') to form a nucleoside intermediate (I-26).

I-27: A nucleoside phosphate derivative with a 2'-OTES group and a 5'-OMe group, reacting with a substituted succinimide (R, R') to form a nucleoside phosphate (I-27).

Reaction Conditions:

1) DABCO, Molecular Sieves, DCM
2) DBU, RT

1) P(O)Cl₃ / P(O)Me₃
2) TEAB 1M

Chemical Structures:

I-26: A nucleoside derivative with a 2'-OTES group and a 5'-OMe group, reacting with a substituted succinimide (R, R') to form a nucleoside intermediate (I-26).

I-27: A nucleoside phosphate derivative with a 2'-OTES group and a 5'-OMe group, reacting with a substituted succinimide (R, R') to form a nucleoside phosphate (I-27).

Reaction Conditions:

1) DABCO, Molecular Sieves, DCM
2) DBU, RT

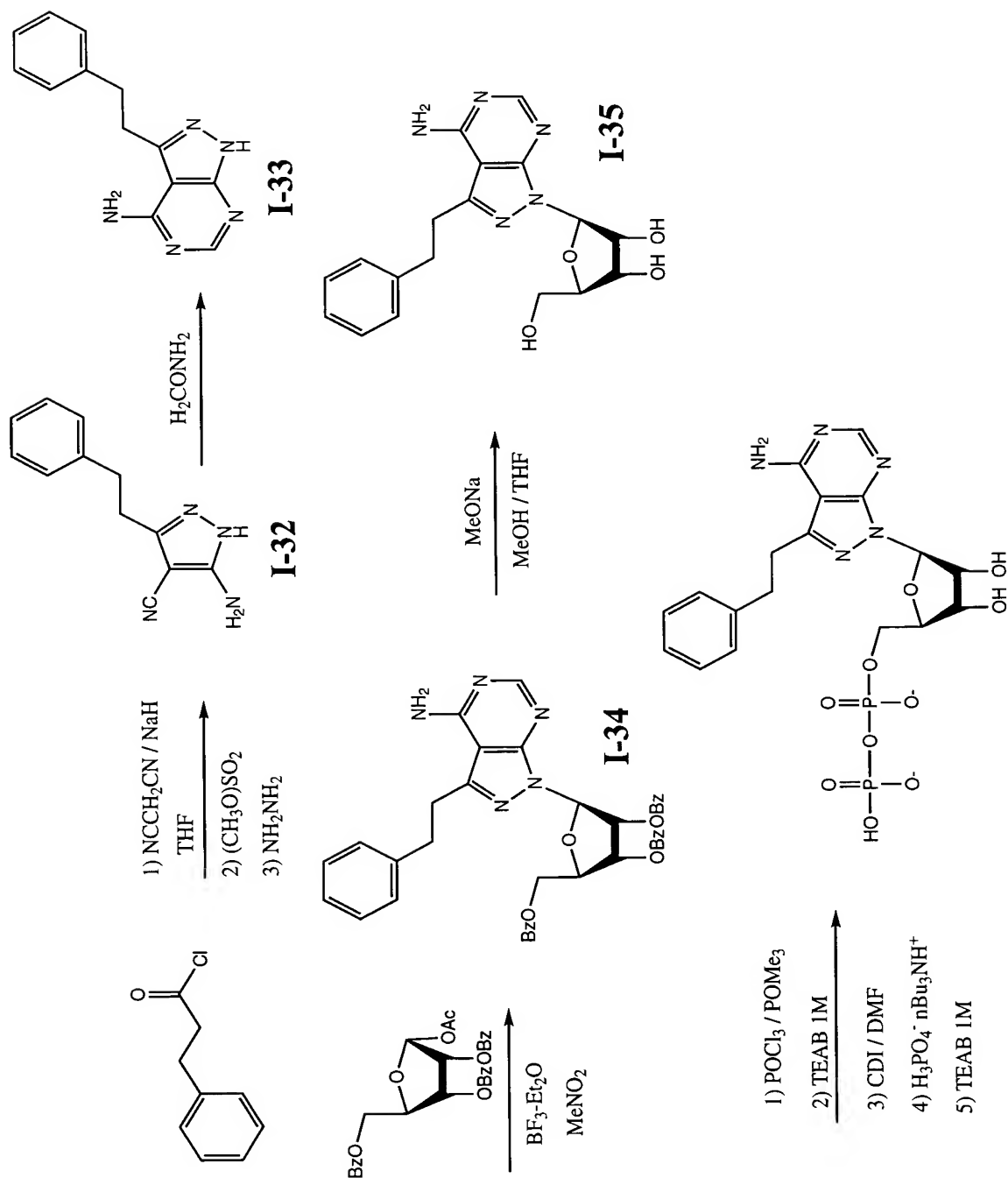
1) P(O)Cl₃ / P(O)Me₃
2) TEAB 1M

Fig. 29

Compound 45



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Compound 64

Fig. 31

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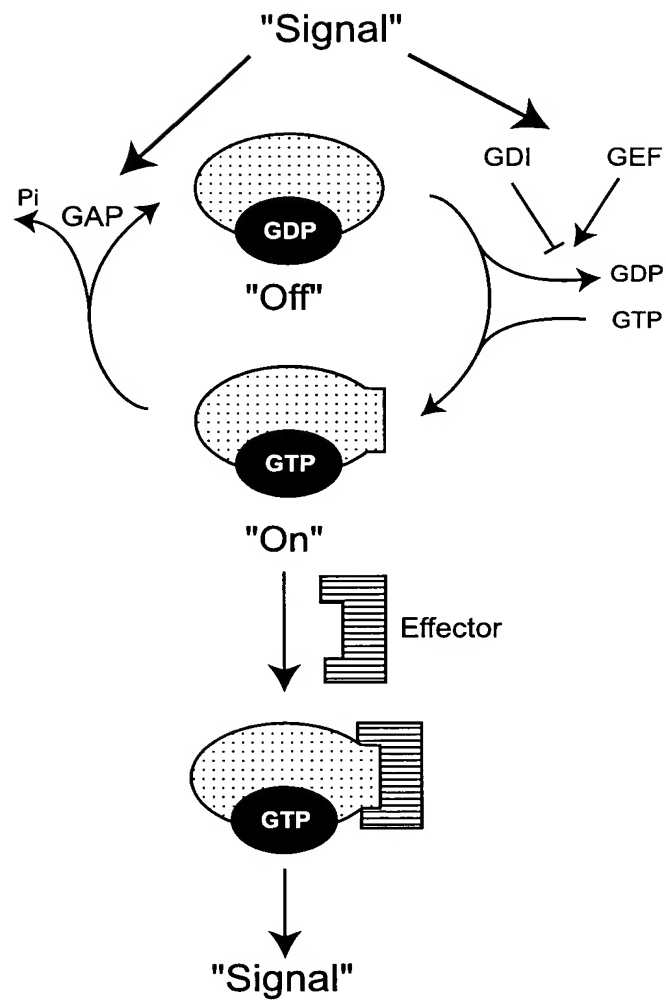


Fig. 32

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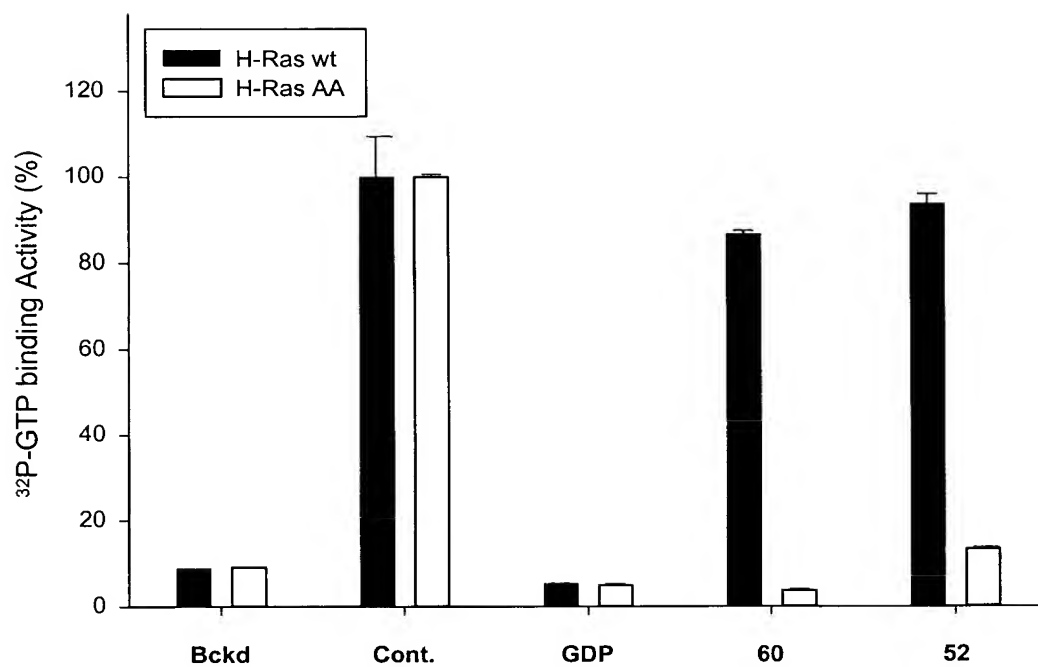


Fig. 33A

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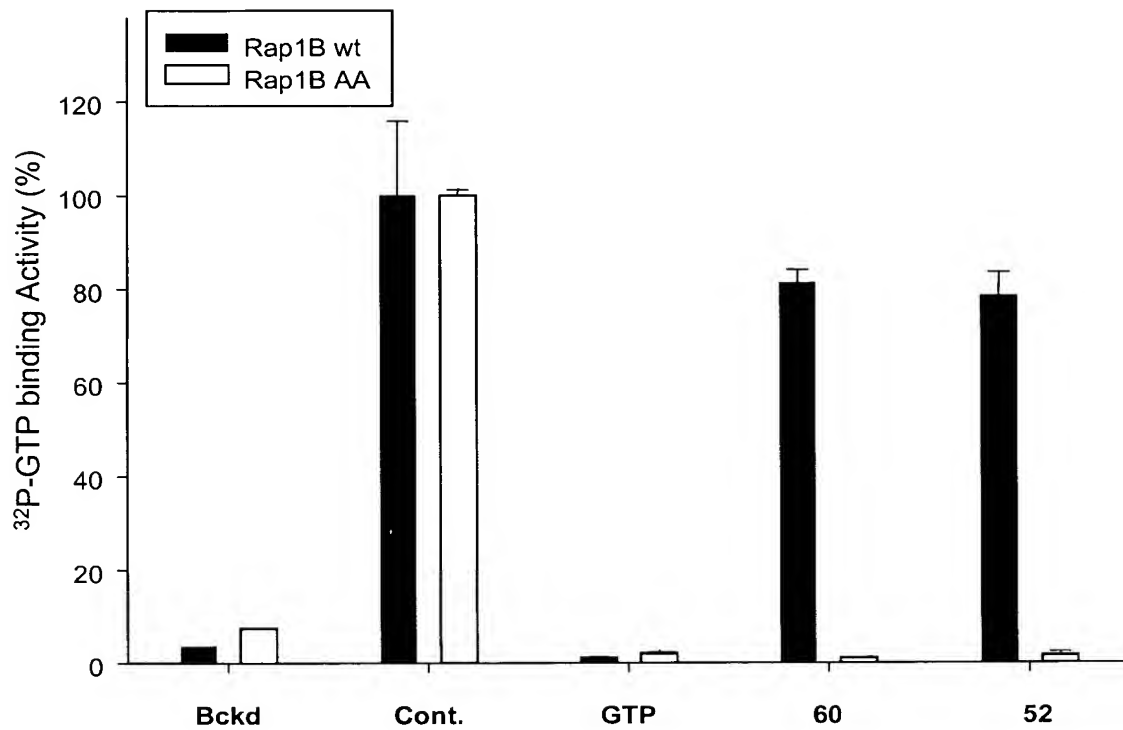


Fig. 33B

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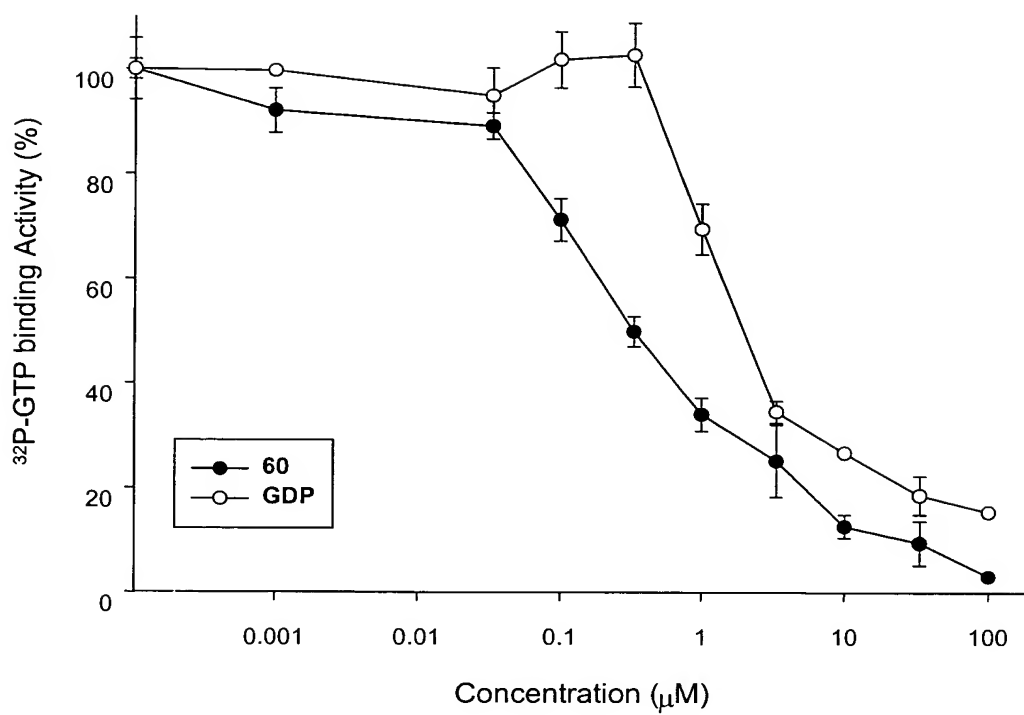


Fig. 34

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RBD pull-down experiment:

Ras	wt	wt	AA	AA	AA	AA	AA
GXP	GDP	GTP	-	GDP	GTP	-	-
Compound	-	-	-	-	-	60	52

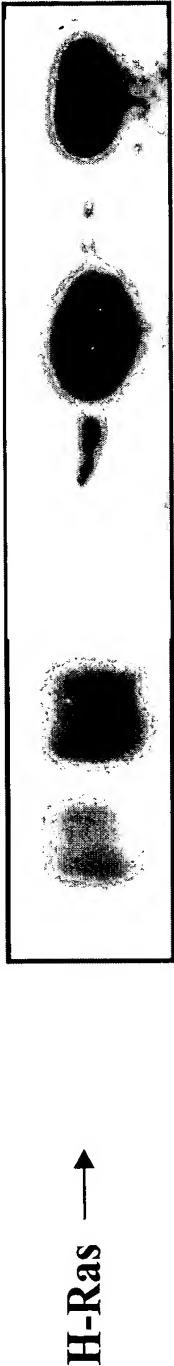


Fig. 35

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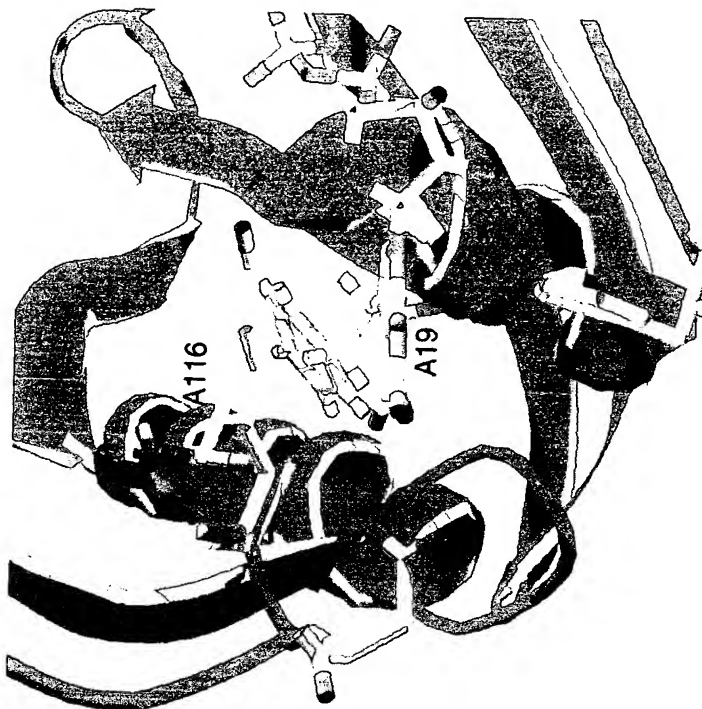


Fig. 36B

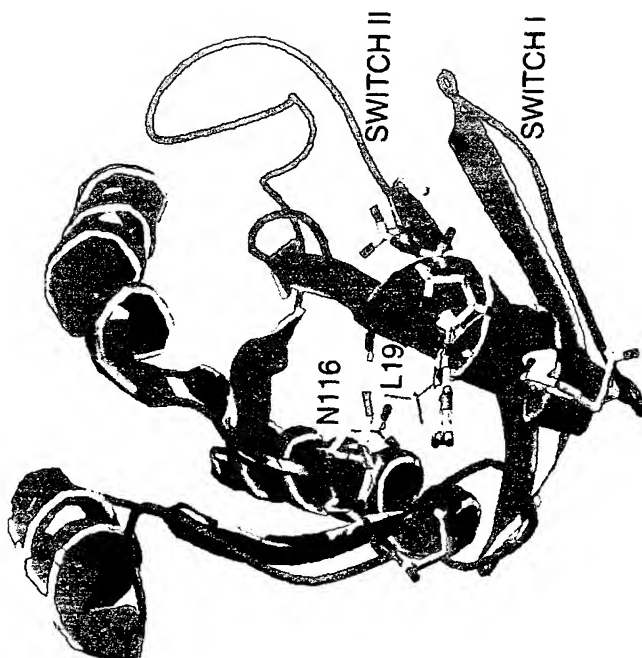


Fig. 36A

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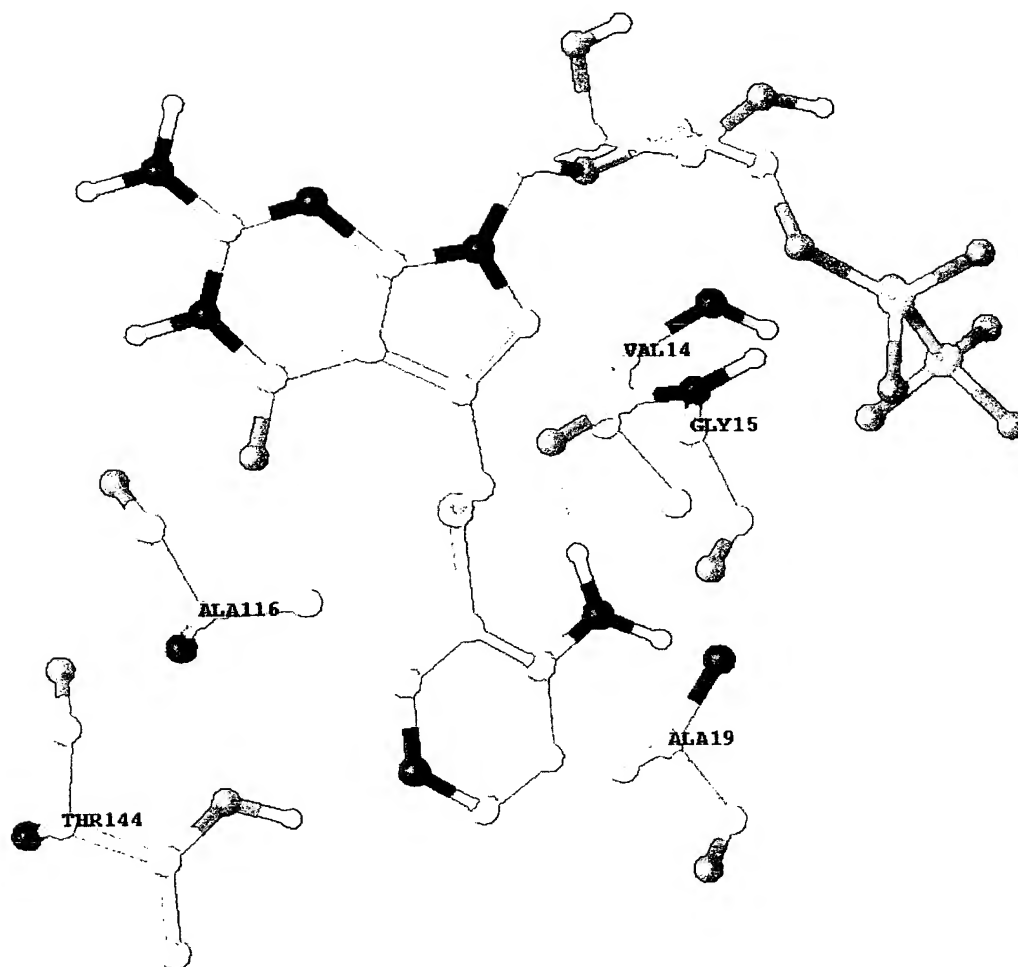


Fig. 37